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Future Housing Requirements in the Regional Municipality of Hamilton-Wentworth

A REPORT PREPARED FOR THE
REGIONAL PLANNING
& DEVELOPMENT DEPARTMENT
REGIONAL MUNICIPALITY
OF HAMILTON-WENTWORTH

BY

**PETER
BARNARD
ASSOCIATES**

PROCTOR & REDFERN LTD.

FEBRUARY, 1976

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Mr. Gordon Dean,
Chairman,
Regional Planning and
 Development Committee,
90 Main Street East,
Hamilton, Ontario.

Dear Mr. Dean:

Attached is our report "Meeting Housing Requirements in the Regional Municipality of Hamilton-Wentworth" which outlines our recommendations for a course of action to ensure that the Region's housing requirements are met and that improvements are made in dealing with the problem areas. This document is intended to provide a basis for discussion and agreement between the local municipalities, the Region and the Province and to provide input into the Regional Official Plan which is currently being formulated.

BACKGROUND

To help deal with the rapidly changing housing market conditions experienced across Ontario over the past few years, the Ministry of Housing has introduced a program of study grants to municipalities. As the Region has been declared a Housing Action Area this study was funded under the Ontario Housing Action Program. These grants are designed to help to allow municipalities the opportunity to develop an understanding of the local housing conditions and to create a program of action to deal with areas of concern. Fact-gathering was to be directed specifically toward outlining the major local issues, future requirements and courses of action.

Thus the purpose of this study has been to focus on three major areas:

1. To Identify Housing Issues by examining trends in population and household formation, quantity and quality of housing, affordability, market conditions, the industry and groups having housing difficulties.

2. To Suggest Appropriate Actions including priorities for housing assistance, the setting of land unit inventory targets, the needs for new senior government policy and identification of existing programs that the Region can use to address its needs.
3. To Provide Input to the Regional Official Plan including short (to 1986) and long (to 2001) term forecasts of housing types for the Region.

SUMMARY OF FINDINGS AND CONCLUSIONS

From our work seven major conclusions can be made concerning the present and future housing situation in the Regional Municipality of Hamilton-Wentworth

1. Even with the anticipated slow rate of population growth the demand for housing will remain strong until the mid-1980's. We anticipate an annual population growth of 0.8% to 1986, however households are anticipated to grow at a higher rate of 2.2% during the 1976-81 period and 2.3% during the 1981-86 period. The higher rate of household growth is the result of two major factors: the abnormally large number of residents in the major household formation age category and the continued trend towards the formation of non-family households. We anticipate that both of these phenomena will level during the mid 1980's resulting in a sharp decline in the demand for housing units beyond that date. For official plan purposes a higher population growth rate of 1.2% annually to 1986 is being used.
2. Lack of diversity in the type and cost of housing in parts of the Region makes it difficult for a cross section of society to live in these areas. Throughout the Region single detached units still account for the bulk of housing stock at 58% while apartments account for the next largest portion of the stock at 30%. However with the exception of Hamilton and Dundas the remainder of the Region has over 76% single detached units. In addition to providing the greatest diversity of housing stock Hamilton has almost the entire inventory of the Region's assisted housing inventory.
3. The Region's housing stock is predominantly of good quality. With the exception of Hamilton, no concentrated areas of poor quality housing exist. In Hamilton there are a number of neighbourhoods with extensive areas of housing which need rehabilitation, an estimated 2% of stock. However during past years gains have been made in improving these units through government housing programs and by increased interest in private rehabilitation.

4. Currently the market is healthy; however lack of apartment construction activity is an area of concern. Currently there are a number of newly completed and unoccupied single detached and semi units. Despite this higher than normal inventory, construction of single and semi housing units has remained healthy. The current vacancy rate in the Region of 3% is also very healthy in terms of the historic norm. However the current lack of apartment construction activity is an area of future concern.

5. In general residents of the Region have retained their ability to afford housing. Rents in the Region have not increased as fast as household incomes by a wide margin. The cost of purchase housing has, on the other hand, outstripped increases in average household incomes. However, there are indications that the introduction of new types of purchase housing has resulted in a majority of households maintaining their ability to afford housing. The rapid increases in cost of these new units during the 1972-74 period is, nevertheless, an area of concern which needs to be monitored carefully. In addition there remains a large number of households in the Region who are finding the cost of housing difficult to afford. But the main reason for their problems has not been the escalation in housing costs but cost inflation in other commodities, most of which have increased in price much faster than rents.

6. A forecast of future requirements indicates that 24% of new housing starts will require subsidy assistance. As existing senior government programs are unlikely to provide this magnitude of funding and local governments lack the necessary revenue sources to raise the funds, it is unlikely that this level of subsidy can be attained. As a result the Region will find it necessary to carefully set assistance priorities. The analysis indicates that the first priority groups should be: low income households with three or more members and renting senior citizens living alone.

7. Current rental economics pose the only major constraint to meeting the Region's housing requirements. Based on current construction and financing costs, break even rents (no return on owners' 25% equity) would have to be higher than current market rents. Although this financial constraint exists the industry will not otherwise constrain the achievement of targets as it has sufficient capacity to provide the required units and an adequate supply in the planning process to meet the requirements for three years. Hard services are also

not expected to constrain the meeting of targets as additions to the existing trunk pattern can serve an additional 400,000 people. While the Niagara Escarpment and Parkway Belt are often cited as constraints to the provision of housing, the future land requirements of the Region can be met without disrupting these programs.

MAJOR ACTIONS REQUIRED

As a result of our analysis we feel that there are five areas in which action by the Region is required. These include

1. Ensuring that the required number of units are provided. Primarily this can be accomplished by approving a land inventory target for future units, by informing other agencies of targets and encouraging them to plan accordingly.

2. Setting assistance priorities and ensuring that they are met. The first step is to obtain the commitment of council to these priorities and then to embark on a program to provide units for low income groups through the use of existing government programs and by encouraging senior levels of government to study areas of concern and make necessary policy changes.

3. Stimulating the construction of rental accommodation. There is little the Region can do to increase the supply of rental accommodation that will be provided in the future. Current action in this field is cause for concern. Stimulus in this area will have to come from senior levels of government.

4. Encouraging the rehabilitation of housing stock in need of repair. The Region should encourage each local municipality to take advantage of existing rehabilitation programs. The passing of minimum maintenance and occupancy bylaws should also be encouraged.

5. Creating a co-ordination function that will ensure implementation. At present no one group has clear responsibility for housing activity so that little monitoring of housing is undertaken. The Region should delegate the monitoring of housing activities to the Regional Planning Department who should report twice annually to Regional Planning and Development Committee on policy successes and changes in local market conditions.

ORGANIZATION OF THIS REPORT

To focus on the actions needed to deal with the housing problems in the Region the report is structured around five areas of need. In the chapters devoted to each area we shall discuss the major trends and conditions contributing to the problem and outline recommended actions with appropriate responsibilities for each level of government. For the reader interested in the approach and methodology used in carrying out various aspects of the work and more detailed analysis, five appendices provide detailed documentation. The information in these appendices will also provide the necessary input for official plan analysis.

* * * * * *

We should like to thank you for the opportunity of helping you in the preparation of your Regional Official Plan and in identifying areas where action is required to address the housing needs of the Region. In completing this study we have received the co-operation of a great many people in the Regional Planning Department and in other agencies and organizations throughout the Region. We have sincerely tried to take into account the many differing viewpoints we have encountered - however, the findings, conclusions, and recommendations in this report are our own and we take full responsibility for them.

Your sincerely

Peter Barnard Associates

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I. ENSURING THAT REQUIRED UNITS ARE PROVIDED

Before one can ensure that the required units are provided it is necessary to have a forecast of the number and types of units needed in the future. This necessitates a careful understanding of trends in population and household formation. In addition to understanding the demographic forces a thorough understanding of the factors that might hinder achievement of these targets is required.

ANTICIPATED DEMAND FOR HOUSING

The key to projecting future Regional housing requirements is to understand trends in population and household formation. In the Region, as elsewhere in the Province, there are a number of key factors currently influencing housing demand that are anticipated to result in a decline in the demand for housing particularly beyond the mid 1980's. These trends are discussed in detail in Appendix A.

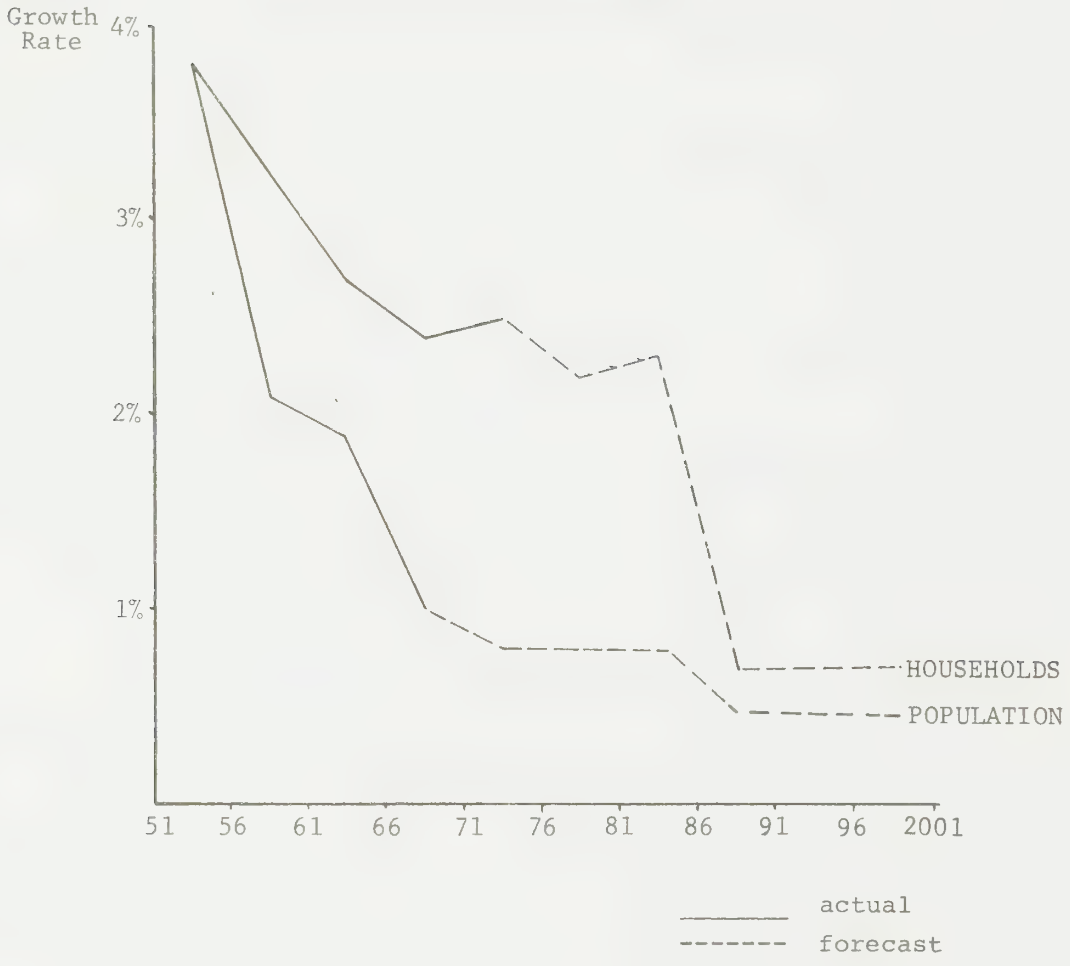
Population Growth Will Continue to Decline

Since 1951 the Region's rate of population growth has been declining steadily. During the 1951-56 period, population grew at an annual rate of 3.8%; by the 1966-71 period the rate had declined to 1.0%. Changes in fertility rates and net migration are the principal causes for this decline.

- We anticipate a population growth rate of 0.8% to 1986 for the Region. This rate is considerably below the anticipated Provincial growth rate of 1.6%. Use of our forecast growth rate will result in the

Exhibit 1.1

BOTH POPULATION AND HOUSEHOLD ANNUAL GROWTH RATES ARE EXPECTED TO CONTINUE DECLINING



following Regional populations:

	Thousands
1971	402 (actual)
1976	419
1981	438
1986	456

For official planning purposes the Region is proposing a higher rate of 1.2% annually which will result in a 1986 population of 465,000.

- Beyond 1986 a further decline to 0.5% is anticipated. This compares to the forecast provincial rate of 1.2% to 2001. Most existing forecasts for the Region anticipate a much faster rate of long term population growth and for official plan purposes the Region proposes to use a rate of 1.7% which results in a population of 551,100 in 2001. However for these rates to occur a sharp increase in either fertility rates or net migration to the Region would be necessary. Use of the 0.5% annual rate of growth results in a 2001 population of 490,000.

Household Growth Will Not Decline Substantially Until 1986

The decline in household growth has not been as substantial as that in population due to the trend toward fewer persons per household. During the 1951-56 period both population and households were growing at the same annual rate of 3.8%. However by the 1966-71 period households were still growing at 2.4% annually compared to 1.0% for population (Exhibit 1.1). This trend will continue.

- The propostion of the population in the main household formation category will remain high to 1986. As the proportion of the population in the main household formation category (15-24 years) will remain large until 1986 (peaking at 1981) the rate of household formation will remain high. However, after 1986 this group will decline as a proportion of total population.

- The trend towards non-family households will continue. This has resulted due to the increase in the two age groups (15-24 and 65+) most likely to form non-family households as well as an increased propensity for these and other age groups to form non-family households. Teenagers leaving home before marriage, the continued trend of seniors to maintain their own households, and the rising divorce rate have been the most significant factors affecting this trend.

- Both of these trends plus the low fertility rate will result in a continued decline in household size. By 1976 we anticipate that persons per household will have decreased to 3.1 declining further to 2.9 in 1981 and 2.7 in 1986. Beyond 1986 we would anticipate a peaking in the trends that have produced this development and as a result we have assumed a household size of 2.6 for the 1991-2001 period.

3,700 Units Required Annually Until 1981

Based on an annual growth rate of .8% allowance for demolition of 235 units and an overall vacancy factor of 2%, a total of 3,700 units will be required annually to 1981 rising to 3,900 annually from 1981-86. The official plan growth rate will result in an average annual requirement of 3,900 (1976-81) and 4,500 (1981-86).

- Beyond 1986 a sharp reduction in requirements is anticipated. Unless there is a sizeable increase in the net migration to the Region or an even sharper increase in non-family household formation the demand for housing will drop substantially during the remainder of this century. This trend is not unique to the Region but will occur throughout the Province and nation. The annual requirements for the remainder of

the century are:

	Units
1986-1991	1,400
1991-1996	1,100
1996-2001	900

Based upon the proposed official plan growth rate, the annual requirements for the rest of the century are:

	Units
1986-1991	2,300
1991-1996	2,500
1996-2001	2,600

- A full range of types is anticipated although apartments will have the largest share. Based upon an analysis of ability to pay, current housing costs and past preference we have forecast future requirements by type. Appendix C describes the methodology in detail. It should be emphasized that the forecast technique is based upon current market conditions, and that changes in interest rates, relative cost of one type of housing or an assistance program could alter the forecast. Thus based upon the current situation we anticipate the following mix to 1981:

Apartments	58%
Row	6%
Semis	6%
Singles	30%

CONSTRAINTS TO PROVIDING REQUIREMENTS

Four major areas were examined in order to ensure that no major constraints existed that would hinder achievement of these targets. Areas examined included the industry, rental economics, servicing and senior government planning policies.

The Industry Will Not Constrain Achievement of Targets

In the Region the residential construction industry is strongly competitive and has sufficient capacity to provide the required number of units. Plans of the industry indicate an adequate supply of units for the short term.

- Industry has sufficient capacity to provide the required units. During the past ten years average annual production of 4,000 units exceeded the 1976-81 requirements of 3,700. Unlike many other areas of the Province the Region has a large number of firms engaged in the industry and a healthy competitive environment.

- Plans of the industry indicate adequate supply of units for the short term. Units presently draft approved and those circulating indicate an approximate 3 year supply which is more than adequate considering the length of the approval process. Current plans draft approved and those circulating consist of the following mix: singles and semis 52%, row 15%, and apartment 32%. The absence of apartment units in this process is not serious due to the large number of blocks in Hamilton which do not need to be subdivided before apartments are constructed.

Current Rental Economics Will Constrain the Supply of Rental Units

Based on current construction and financing costs new apartments cannot be constructed at current rent levels. Even rents set to break even (assuming no return on owners 25% equity) are above the average rents of currently vacant units. This constraint is discussed more fully in Chapter 3.

Hard Services Will Not Constrain Meeting Targets

Overall the Region has adequate servicing patterns that can be expanded to provide servicing to meet requirements for the rest of the century.

- Existing trunk services can be expanded to provide for an additional 400,000 people. The official plan forecasts indicate an increase of only 156,000 people by 2001. However, with expansion of the existing sewage treatment plant the area can support more than double that growth. Additional population that can be accommodated is not uniformly dispersed throughout the Region as indicated by the following estimates of future population:

Stoney Creek	212,000
Hamilton	140,000
Ancaster	35,000
Glanbrook	20,000
Flamborough	3,000
Dundas	-
Total	410,000

- Ample water supplies are also available. The existing Woodward Avenue plant which provides the largest amount of water in the Region can serve an ultimate population of 500,000. This plant can also be expanded at its present site to serve a population of 1,000,000. The other two systems in Ancaster and Waterdown can handle an additional 6,000 and 550 inhabitants respectively.

Senior Government Planning Objectives Can Be Achieved

Both the Niagara Escarpment and the Parkway Belt are often cited as factors that constrain the provision of housing in the Hamilton-Wentworth area. However, this is not likely to be the case. Although localized conflicts will occur the future land requirements for housing can be met without disrupting these programs. It should also be pointed out that housing is considered to be a land use compatible with the plans of the Niagara Escarpment Commission.

ACTIVITIES REQUIRED TO ENSURE THAT REQUIREMENTS ARE MET

The Region cannot force the development of housing units. However it can provide an environment in which the industry and public sector housing agencies can provide the necessary units. The best means of creating this environment is to ensure an adequate annual inventory of land draft approved for development. We recommend twice annual forecast requirements for singles, semis, and rows and three times annual forecast requirements for apartments. Specifically, four activities can be undertaken by the Region to ensure an adequate supply of units.

1. Approve land inventory target. Regional Council needs to approve the recommended land inventory target. It would be desirable to set these targets for each of the area municipalities but until the Regional Official Plan is more advanced this task cannot be undertaken.

2. Inform other Provincial, Regional and local agencies of targets. In order to ensure that all agencies who are involved in providing both hard and soft servicing for housing are planning consistent with the forecast requirements, other jurisdictions should be informed of the targets.

3. Use unit-type forecast as guidelines in community and sub-division plans. To ensure a mix of housing units consistent with the incomes, household sizes and preferences of residents the forecast of unit-type should be used as guidelines in community and

sub-division plans. The Region needs to implement this policy and encourage local municipalities to use these guidelines. Changes in the mix caused by market shifts should also be monitored carefully.

4. Encourage the Province to examine actions that could be taken to minimize leap-frogging development.
A problem that has been creating some difficulty in the Region is that caused by land owners who are unwilling to allow their land to be developed with the result that delays and increased costs are incurred in providing servicing to neighbouring lands. The problem appears to have resulted from the tax treatment of the owners that results when they sell their lands. The Region should urge the Province to examine ways of discouraging a continuation of this development.

II. SETTING AND MEETING ASSISTANCE PRIORITIES

The most serious housing problem facing the Region is the difficulty that many households are having affording housing. However in recent years housing itself has not been entirely responsible for this situation. In general, households renting accommodation have had income increases in excess of rental increases. The situation with purchase housing is more difficult to ascertain but when one considers the impact of new ownership opportunities, particularly row housing, it appears that households have retained their ability to afford housing. Some gains have also been made in dealing with the affordability problem particularly in the case of senior citizens through both income and houseing programs.

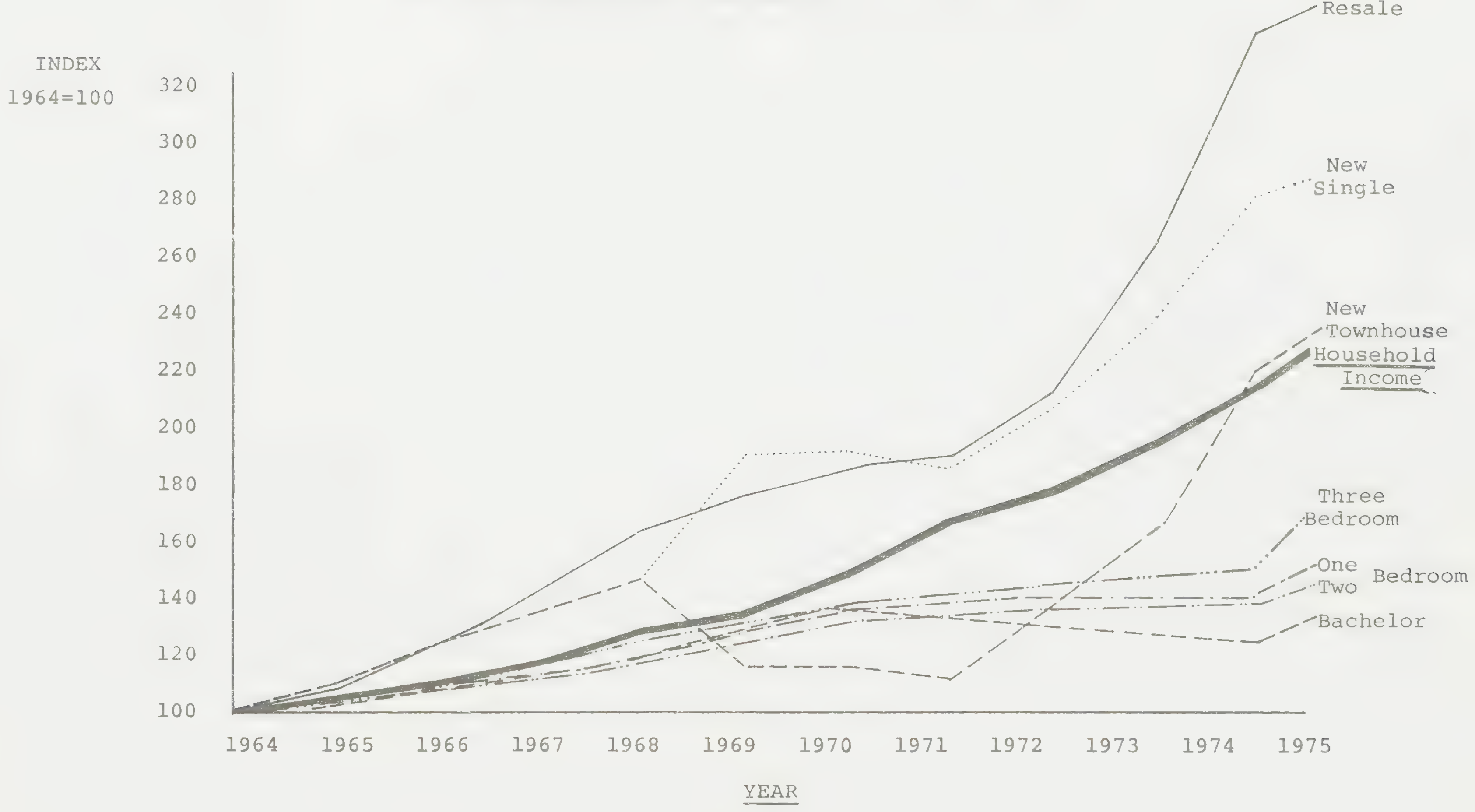
As the number of households ideally requiring assistance is very large (24%) we have undertaken an analysis of household types to determine which should receive priority assistance. Analysis shows that two groups, households with three or more members, including many one parent families and senior citizens living alone, should have priority. An action program has been designed to deal with these groups.

INFLATION HAS CREATED HOUSING AFFORDABILITY PROBLEMS

Rents in the Region have not increased substantially during the past ten years and are currently below rents in other major Ontario centres. Average income increases have outpaced rent increases with the result that the proportion of income spent on rent has decreased. Increases in

EXHIBIT 2.1

PURCHASE HOUSING COSTS HAVE TENDED TO RISE FASTER THAN INCOME WHILE RENTAL COSTS HAVE LAGGED BEHIND



traditional purchase housing on the other hand have been substantial with the result that new forms of ownership opportunities are becoming more common. Appendix C discusses these trends in more detail, while Exhibit 2.1 summarizes them graphically.

- Average household incomes have outpaced rent increases. Since 1964 average household incomes in the Hamilton-Wentworth Region have increased 115%. Rents on the other hand have not increased as substantially.

Bachelors	38%
One bedroom	53%
Two bedroom	48%
Three bedroom	90%

  A large portion of this increase has occurred in the past year. Compared to other parts of the province rents in the Region are lower than larger centres and compare favourably with those of smaller communities.

- Purchase housing has outpaced the increase in household income. Both new and resale housing units have increased substantially since 1964. The average resale increased from $14,241 in 1964 to $42,528 in 1974; an increase of 199%. New single detached homes financed under the NHA increased from $16,551 in 1964 to $41,575 in 1974. Recently, increases have been moderating to the 5% to 7% per annum range.

- Introduction of new types of ownership have eased the situation. In the late 1960's the introduction of row housing helped households in the Region maintain their ability to afford housing. Prior to this date NHA financed single detached were the lowest cost form of purchase housing. However, with the introduction of row housing for purchase a lower cost alternative was added. When the lowest cost new purchase opportunity is compared to household incomes we see that average

household incomes have kept pace with the lowest cost purchase opportunities. The recent sharp increase in this housing type however needs to be monitored carefully.

SOME PROGRESS MADE IN ALLEVIATING AFFORDABILTY PROBLEM

In recent years improvements have been made in alleviating the affordability problem particularly for senior citizens. Improvements for families have not been as significant. While a large number of government assistance programs combined with townhousing have helped to maintain purchase opportunities for many of the Region's households, a large number of households are still having difficulties affording housing.

- Improvements have been made in addressing the needs of senior citizens. With the introduction of a guaranteed annual income for senior citizens in the province, senior couples should have adequate income to afford market housing. In addition to the impact of the increased minimum income, 1,083 rent-geared-to-income senior citizen units have been provided since 1969. Units currently planned and under construction will raise this figure by 1,484 units to a total of 3,326 units. Community groups have also produced 70 units with an additional 425 under construction.

- Some progress has made made in alleviating the problems of other low income groups. Since 1969, 1,050 rent-geared-to-income family units have been provided plus 378 rent supplement units. Units currently planned and under construction will add a further 872 units bringing the total inventory to 3,041 rent-geared-to-income family units.

In addition 740 limited dividend units have been added since 1969 to provide an inventory of 1,400 limited dividend units. In spite of this, many households continue to have problems and waiting lists for public housing remain long.

- Region's supply of assisted units is found almost exclusively in Hamilton. In the rest of the Region only Stoney Creek has assisted units - 43 for senior citizens. Other communities are however in the process of providing units. Family units in the planning phase include 71 in Stoney Creek and 30 in Dundas. Senior units include 20 in Ancaster and 30 in Dundas all in the planning stage. The minor nature of these plans would indicate a further concentration of public housing in Hamilton.

- Many assistance programs have been provided for purchase housing. A great deal of aid has been focused on assisting households to purchase housing through the Assisted Home Ownership Plan, the HOME program, the introduction of the Registered Home Ownership Savings Plan and cash grants to purchasers. The large landholdings of the Ministry of Housing in the Saltfleet community will provide significant opportunities to provide assisted purchase opportunities in the future.

WHO SHOULD RECEIVE ASSISTANCE PRIORITY

There is no question that a great many households in the Region need assistance in affording housing. In order to help alleviate this problem the Region must set assistance priorities. Recognizing the impossibility of totally eliminating this complex income problem through

local housing policies we have attempted to set realistic assistance priorities based upon the anticipated increase in households requiring assistance and availability of senior government assistance programs.

Two Groups Should Receive Priority Assistance

Of all types of households those with three or more members and in particular single parent households are having the greatest difficulties. The group having the next greatest difficulty are senior citizens living alone. Other low income households although experiencing difficulties appear to be in a less serious situation.

- About 400 low income units are required annually for households with three or more members. This target is based upon the anticipated increase of households of this type, current rents of apartments and a bedroom occupancy of two. If we added the additional criteria of providing households with children ground related town housing the annual subsidy requirement would rise to approximately 800 units.

  Currently government shelter allowances make it difficult for these families to afford rental apartments. Households of this size with only one wage earner on a minimum wage cannot function adequately. In addition a large number of these households with young children although able to afford current rents, are often discriminated against when looking for accommodation. The lack of construction of suitable family rental accommodation has further aggravated their difficulties.

- Senior renters living alone cannot function adequately on the current minimum income for seniors. The current gains income for senior citizens of $2,900 is not adequate for a single senior to afford a market bachelor apartment and maintain adequate household functioning. Senior couples can however function adequately on a GAINS income and pay market rents.

		Single		Couple
Gains Income		$2900		$5800
Funds needed for adequate household functioning	$2100		$3500	
Housing	1600	3700	1900	5400
Residue		-$800		$400

Other Household Problems are not as Severe

Although they are currently experiencing and are anticipated to have continued problems in the future, low income singles other than seniors and couples have adequate assistance if on shelter allowance and should be able to pay for housing and maintaining an adequate level of household functioning.

- Low income couples have adequate assistance. Shelter allowance of $150 monthly is sufficient to rent a one bedroom apartment. Households where two people are working on even the minimum wage should also have sufficient income to afford market accommodation.

- Low income people living alone should also be able to cope. Singles working at even the minimum wage have adequate income to afford market housing. Those on shelter allowance should also be able to find accommodation recognizing that they can be more flexible in their accommodation. They can live in low cost rooms and may share accommodation.

ACTIONS NEEDED TO DEAL WITH PRIORITY GROUPS

In order to address the problems of the priority groups the Region needs to first set targets for each group and then embark on an action program to ensure that they are met. The actions outlined here are listed in order of preference and if the first are successful the latter activities may not prove necessary. However before getting into specific activities there are two more general activities that need to be discussed, non-profit housing corporations and land banking.

Becoming a Non-Profit Housing Corporation is not Recommended at This Time

One method of delivering the required subsidized units would be for the Region or the local municipalities to become a non-profit housing corporation. Funding exists for these corporations so that they can build new low to moderate income housing and purchase and renovate existing housing. This program can be successful at providing an inventory of lower cost housing in the future. However to be successful a municipality must be willing to make a sizeable commitment by hiring staff with the required skills in building, rehabilitation and managing housing. It should also be emphasized that the management of assisted housing units is an extremely difficult management task. As other government programs can deliver similar types of units it is recommended that attempts be made to deliver required units through these other programs before embarking on a non-profit program.

An Adequate Land Bank Already Exists in the Region

Land banking as a strategy to reduce housing costs can be effective if the program is extensive enough to control 25% to 30% of the developable land area. At the present time the Saltfleet Community has the potential to provide this requirement for the remainder of this century. This development combined with current demographic trends which indicate a sharp reduction in long term housing requirements would indicate that an additional land bank is not required at present.

At a later date if the Region or local municipalities decide to become a non-profit housing corporation, land banking could be used as a tool to acquire sites for future development.

400 Additional Households With Three or More Members Need to be Provided Assistance Annually

In order to meet this target the following actions are suggested

1. Encourage the province to investigate the possibility of raising shelter allowances. As some of these households are on government shelter allowances their housing situation could be eased by raising their incomes through increases in shelter allowances. The Region and local municipalities should jointly seek a review of the feasibility of this measure.

2. Apply to the Ministry of Housing for rent supplement units. This program is an ideal means of integrating low income households throughout the community. It normally makes it possible to obtain units in established neighbourhoods which facilitates the access of low income households to needed support services. Its success however will depend upon an adequate supply of units suitable for families. The Region should encourage each local municipality to apply to the Ministry of Housing to issue tender calls for these units. Consideration should also be given to applying rent supplements to the units currently occupied by the low income households.

3. Pressure CMHC and the Ministry of Housing to provide opportunities for developers under the modified limited dividend program. This program also provides a useful means of scattering low income households throughout the community. The Region and local municipalities should pressure CMHC and the Ministry of Housing for these units and co-operate in finding suitable sites. Both CMHC and the Ministry of Housing should also be encouraged to have developers provide low rise units as opposed to the high rise units that have normally been built.

4. Approach the Ministry of Housing for additional public housing units. This action should only be attempted when the other actions to alleviate problems for this group prove ineffective. Increasingly the difficulties of finding sites and the problems that result when low income households are concentrated in one development are making this program unpopular. If necessary the Region should encourage each local municipality to apply to the province and federal government for funding.

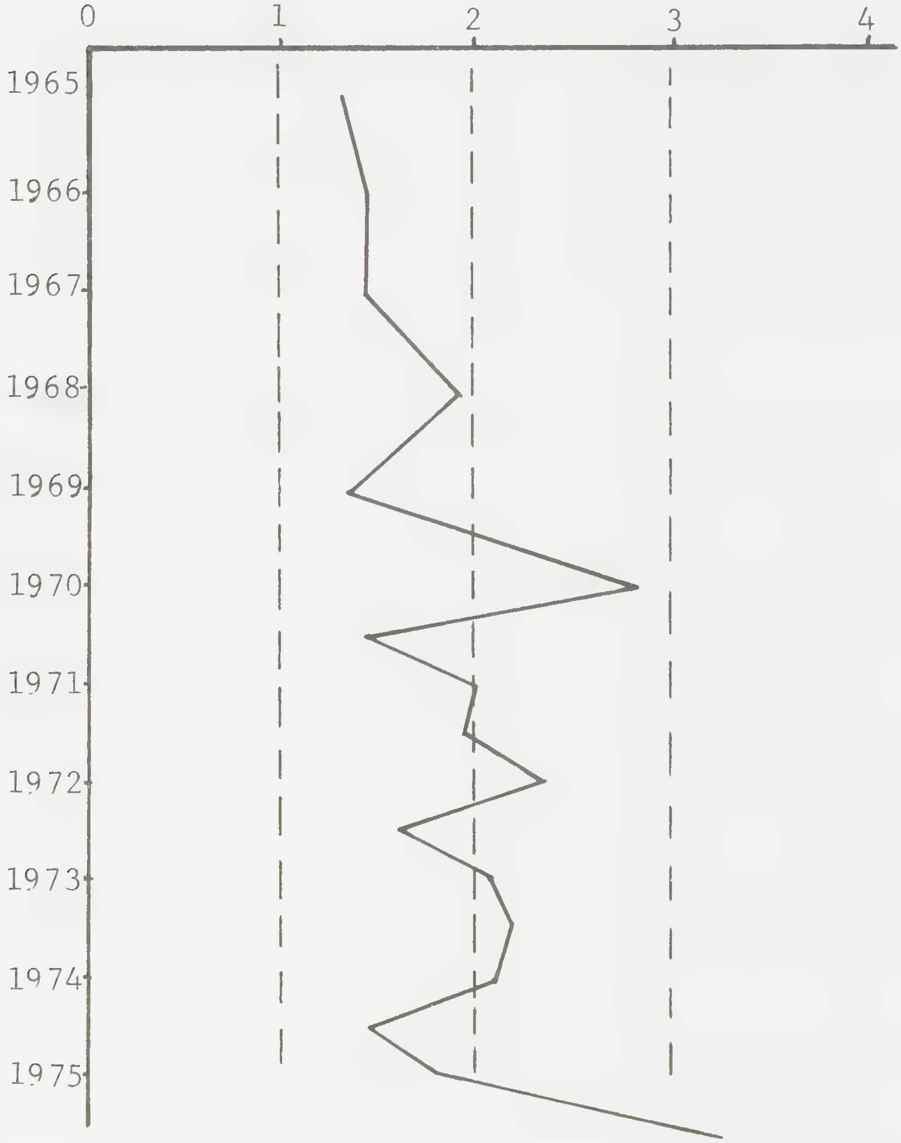
Two Actions Can Ease the Problems of Single Seniors

1. Encourage the province to reassess the GAINS program for single seniors. Use of a rent supplement to the GAINS income or an overall increase in this income for single seniors would remove the necessity for the Region and local municipalities to increase the supply of public housing units for seniors. The Region and local municipalities should encourage the province to assess ways of using the GAINS program to alleviate the housing difficulties of senior citizens.

2. Ensure that 550 units currently in planning for senior citizens are completed in the next five years. This action should only be embarked upon if the GAINS reassessment proves to be ineffective. Should that be the case, the units currently under construction plus the 550 in planning will provide sufficient units to meet the Regions' required needs. These additional units will provide sufficient units for both the anticipated increase plus current seniors unable to obtain a public housing unit. If required the Region should encourage the local municipalities to apply to the province for the construction of these units.

Exhibit 3.1

HISTORICALLY VACANCY RATES HAVE ALSO BEEN LOW



Source: C.M.H.C. Apartment Vacancy Survey

III. STIMULATING RENTAL CONSTRUCTION

Although current vacancy rates are high in terms of the historic norm there is concern that the current lack of construction activity, particularly of low rise apartments suitable for young children, will create a supply problem in the future. There are already indications that families with children are currently experiencing difficulties in finding suitable apartment accommodation. The general lack of apartment construction is nationwide and appears to be the result of high interest rates, the undetermined nature of rent control and changes that have occurred in tax laws.

CURRENT APARTMENT MARKET BASICALLY SOUND

Historically the apartment vacancy rate in the Region has always been below the 3% - 4% vacancy rate that is traditionally cited as a sign of a healthy rental market. As rents have not increased significantly through this period of low vacancy rates and are not out of line with other Ontario centres it would appear that a vacancy rate of this magnitude is not necessary for the Region. The relatively slow rate of growth of the Region as compared to other Ontario centres is the most likely explanation of this phenomenon.

As the chart on the opposite page indicates, the November, 1975 vacancy rate of 3% is the highest that has ever been experienced since C.M.H.C. commenced their survey in 1965, Exhibit 3.1.

FUTURE SUPPLY PARTICULARLY OF FAMILY UNITS IS AREA OF CONCERN

Although the current vacancy rate is adequate, present levels of construction activity may result in a future problem and thus should be monitored carefully. The type of rental units being constructed is also an area of concern as few ground related rental units are currently being provided.

Current Lack of Apartment Construction Needs to be Monitored Carefully

Our forecast requires that 2,150 apartment units be provided on an annual basis. Current activity (1,111 units for first eight months) suggests that this is not likely to be achieved. Present major apartment construction activity consists of three government assisted developments and a luxury condominium. A one year slump however is not too serious due to the large number of apartment units started in 1973-74. However two current problems indicate that this situation needs to be monitored carefully to ensure that a serious problem does not develop in the next 12 to 18 months.

- Current rental economics are not attractive. Based on current construction and financing costs break-even rents (assuming no return on owners 25% equity) would have to be higher than current average rents of vacant units

	Break-Even	Current Rent
Bachelor	$144	$131
1 Bedroom	$178	$161
2 Bedroom	$213	$195
3 Bedroom	$294	$266

This situation would alter significantly if interest rates decline from current historic highs.

- Current policy environment is not conducive to apartment investing. Until investors have a clear indication of the likely policy on rent control particularly as it applies to new buildings it is unlikely that new commitments will be made to provide the needed units.

Lack of Interest in Family Units is Currently an Area of Concern

In the last three or four years there has been a decrease in the number of low rise and row house units that are available for rent. In addition there is evidence to suggest that the number of older single units for rent has also declined. Ideally about 870 units of this type should be provided annually.

- Increasingly rental units constructed are in high-rise structures. In Hamilton down zoning of sites suitable for low rise units is an increasing occurrence because of the lack of interest in construction of these types of units. Cause of the lack of interest is not entirely understood but the changes in the Tax Act in 1971 are believed to have increasingly removed the individual investor from the rental market. These investors who were attracted by personal tax incentives appear to have been the major source of funds for this type of unit. Two additional facts are also cause for concern. New high rise buildings in the Region are currently only including a 5%-10% proportion of their units as three bedrooms and virtually all free market row housing units being built in the Region are for ownership.

- Currently some groups are having difficulties finding family accommodation. Both the Ministry of Housing and Regional Social Services have reported difficulties in this area. The Ministry of Housing would like to see rent supplement units for families but current lack of supply is making these units difficult to provide. The housing placement office of Regional Social Services reports that low cost singles offered to them for families have decreased. In the first six months of this year only 4 units had been offered for their use and only 20 during 1974. In previous years 65 (1971) and 64 (1972) units were made available to clients of this agency. The problem seems to be that low cost rental homes are disappearing due to rehabilitation, demolition and income upgrading.

THESE TWO PROBLEMS REQUIRE THE FOLLOWING ACTIONS

Government assisted programs should not be used to just raise the supply of rental units in general but should be directed towards addressing the needs of the assistance priority groups. As the problem is nation wide solutions will have to come from senior governments. Local incentives are not sufficient to have a major impact on apartment starts.

The Region and local municipalities can however help to encourage the construction of low rise apartment units through the sub-division process.

Stimulate Apartment Construction

Two activities are suggested to ensure that the future supply of apartment units is adequate.

1. Encourage senior governments to examine rental investment incentives. Current lack of activity can only be reversed through higher rents, lower interest rates or new tax concessions. The fall 1974 Federal Budget contained a special provision to stimulate new rental investment by reinstating the depreciation provisions removed in the 1971 Tax Reform. This provision has recently been extended to 1977 but to date it has had little impact on apartment starts. The Region should therefore propose that both the provincial and federal governments should undertake studies of new incentives and assess the impact of the speculation and land transfer tax on rental unit investors.

2. Monitor apartment construction activity carefully. As has been mentioned the high level of apartment activity in the past two years when combined with current construction and vacancy rates is not yet cause for alarm. However if the current trend in apartment activity continues a serious problem will develop in the next 12 to 18 months.

Stimulate Construction of Units More Suitable for Families

Approximately 870 of these units are required annually in the Region. To ensure their provision the Region and local municipalities can implement two activities to ease the situation. In addition senior governments should be encouraged to examine the lack of interest in this type of construction.

1. Ensure adequate mix of family rental units through the sub-division process. As each of the local municipalities in the Region is responsible for detailed land use planning and for working out the details of sub-division applications with the development industry they should be responsible for ensuring the required mix. The Region should co-operate with each local municipality in order to achieve the annual unit target.

2. Discourage the conversions of row and low-rise units to condominium. Although not a widespread problem currently each municipality should be aware of impact of conversions on the supply of family rental accommodation. If it becomes necessary each local municipality should pass by-laws preventing this type of conversion.

3. Encourage C.M.H.C. and the Ministry of Housing to examine the lack of interest in the construction of low-rise rental units. Lack of interest in this type of apartment construction seems to be prevalent throughout most major centres in Ontario. The cause for this lack of activity needs to be understood so that techniques of stimulating this type of unit can be devised.

IV. REHABILITATING HOUSING STOCK

Overall housing stock in the Region is in a good state of repair. However there are a number of units needing major repair which combined with the age of the Region's housing stock makes a great many units eligible for rehabilitation assistance programs. Targets for rehabilitation need to be set for each area municipality and actions taken to ensure the housing stock is maintained at a high level of quality.

LESS THAN 2% OF STOCK NEEDS MAJOR REPAIR

We estimate that at present there are 2,300 units requiring major rehabilitation in the Region. In recent years there has been great interest and activity in the private improvement of housing throughout the Region. In addition some areas of concentrated deterioration have been removed.

Majority of Units Needing Repair are in Hamilton

Of the 2,300 units requiring major repair, 90% are found in Hamilton, predominantly in neighbourhoods surrounding the downtown. Former urban renewal programs and private rehabilitation have over the years helped to reduced this number to its current level.

In Rest of Region no Concentrated Areas of Poor Quality Housing Exist

Outside Hamilton units requiring repair are scattered throughout both built-up and rural areas. A few small pockets exist in old cottage areas along Lake Ontario.

However a Large Number of Units are Eligible for RRAP and OHRP Funds*

The nature of these programs is such that virtually any low income person owning a house built more than 25 years ago would probably have repairs that could be funded under these programs. Replacement of, or major repairs to, key services such as electrical, plumbing and heating are eligible under the program. These programs will be particularly helpful to senior citizens who own homes.

ACTIONS REQUIRED TO IMPROVE AND MAINTAIN HOUSING QUALITY

In order to continue to improve housing quality and maintain a high standard a number of actions are required.

1. Maintenance and occupancy by-laws should be enacted. The key to the preservation of housing stock is the establishment of a minimum standard for all existing housing units. These by-laws are also strongly encouraged by the province and CMHC in order to participate in rehabilitation programs. At present only Hamilton and Glanbrook have these by-laws. All other communities in the Region with the exception of Dundas have however passed a resolution setting standards regarding building maintenance and health in order to participate in the OHRP program. Ideally each community should have passed "Standards for Maintenance and Occupancy" by-laws. The Region should strongly encourage each municipality to pass these.

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* *Residential Rehabilitation Assistance Program and Ontario Home Renewal Program*

2. Each community should participate in the Ontario Home Renewal Program. As funding exists to help low income home owners to maintain their dwellings each community in the Region should provide their residents with this opportunity. At present only Dundas has not taken steps to participate. We would suggest the following OHRP annual targets for each municipality based on present per capita funding and the current average cost of rehabilitation of $3,200 per unit.

	Units/Annually
Hamilton	195
Stoney Creek	30
Flamborough	20
Dundas	20
Glanbrook	10
Region	275

3. Hamilton should continue to participate in the RRAP and NIP programs. The federal Residential Rehabilitation Assistance Program and its partner the Neighbourhood Improvement Program are designed for concentrated areas requiring rehabilitation. Hamilton is the only part of the Region meeting this criteria. At present the City is participating in these programs and has plans to expand activity to additional neighbourhoods.

V. SETTING UP A MONITORING PROGRAM

Throughout the course of this study it readily became apparent that no one group or agency had a clear understanding of the housing situation in the Region. Also no formal links exist between the Region and agencies that are involved in the production of housing, particularly Central Mortgage and Housing Corporation and the Ontario Ministry of Housing. We feel that in order for action in housing to be successful there needs to be a system designed to monitor the housing situation and to determine progress towards the targets.

A MONITORING SYSTEM NEEDS TO BE ORGANIZED

The Regional Planning and Development Department should be assigned responsibility for this activity. Data collected for analysis is for the most part readily available although the format may not be entirely suitable. A short semi-annual report needs to be produced and presented to both Regional and local planning and development committees.

Regional Planning and Development Department Should be Assigned Responsibility

A member of the current staff of the Regional Department of Planning and Development should be assigned responsibility for monitoring progress towards the targets and to identify areas of concern.

Formal links should be established with a number of groups within the Region in order to exchange and share information on housing. Groups that should be included are:

- Planning and Development Department or Planning Consultants for Each Local Municipality
- Hamilton Housing Authority
- Central Mortgage and Housing Corporation
- Ministry of Housing
- Hamilton Home Builders Association
- Hamilton Real Estate Board
- Regional Department of Social Services and other social agencies

Most Information Required Easily Obtainable

To adequately monitor progress towards the achievement of housing targets information is required on production, inventory approved and in process, and progress made towards meeting the assisted unit requirements.

- Production and inventory information is currently compiled. Starts and completions of units are already compiled for Statistics Canada by each of the area municipalities. Information on units in each stage of development of the approval process can be obtained from the Ministry of Housing printout of active subdivision files. C.M.H.C. information can be used to determine current rental situation and inventory of newly completed vacant units.

- Progress towards dealing with assistance priorities available from agencies involved. C.M.H.C. and the Ministry of Housing can provide this information.

These sources will be able to provide information on subsidized rental units for both single seniors, households with three or more members. Rehabilitation plans for existing units can be obtained from local municipality building departments.

- Identification of new problem areas is more complex. Understanding the complex affordability question will be the key to monitoring this area. No good source of data exists although a variety of sources can be pulled together for an understanding of the situation. Trends in the cost of ownership, rents and household incomes are all required. C.M.H.C., local realtors and developers, and Statistics Canada will be particularly useful in this area.

Information Needs to be Disseminated on a Regular Basis

Monitoring of the situation in itself will not ensure that the required actions are achieved. A formal reporting arrangement should be set up with Regional Planning and Development Committee on a twice yearly basis. A short report should be prepared reporting on production, inventory, progress towards assistance targets and emerging problems. The report should be circulated to involved groups and agencies throughout the Region and comments should be encouraged. New targets and revisions to existing targets should be made as conditions warrant.

APPENDIX A

ANALYSIS AND FORECAST OF POPULATION AND HOUSEHOLD TRENDS

The prime determinant of future demand for housing is the growth in population and the rate at which new households are created. This appendix explains the approach and methodology used in projecting population and households and presents the detailed results for the Hamilton-Wentworth Region.

A. POPULATION GROWTH

The basic methodology for projecting future population was to analyse and evaluate the several forecasts developed for the Region on the basis of the most recent trends and experience and select the most likely as a base projection. Then, to provide a fuller understanding of the implications of population growth on housing, higher and lower growth alternatives were included.

PAST TRENDS

The principal criteria for evaluating forecasts was past trends for the Region and the extent to which these trends are reflected in the forecasts.

1. The growth rates of the Region and the Province have declined rapidly since 1951. As Table A-1 shows, the Region grew faster than the Province between

1951-56 and slower thereafter. This changed relationship is further supported by the decrease in the Region's percentage of the Provincial population after 1956 (Table A-2).

A look at the comparable trends for Hamilton City and the CMA (Region+Burlington+Grimsbsy) in Tables A-1 and A-2 bring the population distribution within and immediately outside the Region into sharper focus. Basically, the City's slower growth (except between 1956-61) shows a continual sub-urbanization process. On the other hand, the CMA, while decreasing its annual growth, has consistently grown faster than the Region as well as the Province (until 1966) pointing to very rapid growth in Burlington. The CMA has accordingly increased its share of the Provincial population since 1951.

2. Fertility and net migration are the principal causes for population decline. From an analysis of the basic demographic variables affecting population growth, it is clear that fertility and net migration are the principal causes for decline. The mortality rate in contrast to fertility rates and migration has been decreasing but with a totally consistent pattern.

    a) Fertility rates are a major reason for the growth rate decline from 1961-71. The average fertility rate over that decade was 2.88 (when the province grew at an average annual rate of 2.1%) representing a substantial decline from the average rate of 3.67 for the 1951-61 decade (when the Province grew annually at 3.1%). The 1941-51 decade closely resembled the 1961-71 years in that the average

Table A-1

ANNUAL POPULATION GROWTH RATES*
DECLINING SINCE 1951

YEARS	ONTARIO	HAMILTON CMA	HAMILTON CITY	H-W REGION
1951-56	4,598,000 to 5,405,000	280,293 to 338,294	208,321 to 239,625	263,256 to 312,924
	3.3%	3.9%	2.9%	3.8%
1956-61	5,405,000 to 6,236,092	338,294 to 401,401	239,625 to 273,991	312,924 to 348,181
	2.9%	3.5%	2.8%	2.0%
1961-66	6,236,092 to 6,960,870	401,401 to 457,410	273,991 to 298,121	348,181 to 383,175
	2.2%	2.6%	1.7%	1.9%
1966-71	6,970,870 to 7,703,106	457,410 to 498,523	298,121 to 309,175	383,175 to 401,883
	2.0%	1.7%	0.7%	1.0%

Table A-2

REGION AND CITY DECREASING
PERCENTAGE OF ONTARIO POPULATION

YEAR	HAMILTON CMA	H-W REGION	HAMILTON CITY
1951	6.1%	5.7%	4.5%
1956	6.3%	5.8%	4.4%
1961	6.4%	5.6%	4.4%
1966	6.6%	5.5%	4.3%
1971	6.5%	5.2%	4.0%

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* *Growth rates are compound at 5 year intervals*

annual fertility rate was identical (2.88) while the average annual growth was similar (1.9%). Obviously, fertility rates do not explain the decline in growth rates from 1951-56 to 1956-61. Therefore, we looked at the net migration into the Province.

b) Net migration shows almost no consistency over time in that it can fluctuate widely from year to year. However, averaging the numbers for five year periods as well as recording a positive or negative change in the annual migration from the first to the fifth year of each time period produced the results in Table A-3. Balanced against the five year fertility trends, we see that the drop in net migration between 1951 and 1961 was sufficient to counter the increased fertility rate. Between 1961-66, both averages decreased while in the 1966-71 period the fertility rate dropped sufficiently to counter a rise in average net migration.

Table A-3

Combination of Fertility and Migration Trends Has Produced a Declining Growth Rate for Ontario

Years	Fertility Trend Δ and Average Annual Rate	+ or - Δ	Net Migration Trend Δ and ave. annual #	+ or - ave. Δ
1951-1956	3.2 to 3.68 ave. 3.54	+	56,154 to 42,715 annual ave. 69,497	-
1956-1961	3.68 to 3.76 ave. 3.75	+	42,715 to 18,334 annual ave. 57,841	- -
1961-1966	3.76 to 2.79 ave. 3.4	-	18,334 to 95,229 annual ave. 45,401	+ -
1966-1971	2.79 to 2.22 ave. 2.48	-	95,229 to 76,458 annual ave. 77,617	- +

ANALYSIS OF EXISTING PROJECTIONS

Three existing population projections were analysed in terms of the past trends and current development in those trends. All three extend to the year 2001 with a 1971 base and annual compound growth rates computed over two 15 year spans: 1971-86, 1986-2001.

1. TEIGA'S Economic Analysis Branch prepared a forecast in 1973 for Wentworth County.

2. COLUC (Central Ontario Lakeshore Urban Complex) Task Force prepared a forecast for the Hamilton area with boundaries approximately those of the Region - we applied their growth rate to the Region's population base.

3. THE REGION'S own forecast prepared as preliminary input to a new Official Plan.

Exhibit A-1 graphically presents the three projections while Table A-4 presents the respective growth rates, target populations and basic assumptions or approach.

EXHIBIT A-1

THREE EXISTING POPULATION PROJECTIONS DIFFER LARGELY PAST 1986

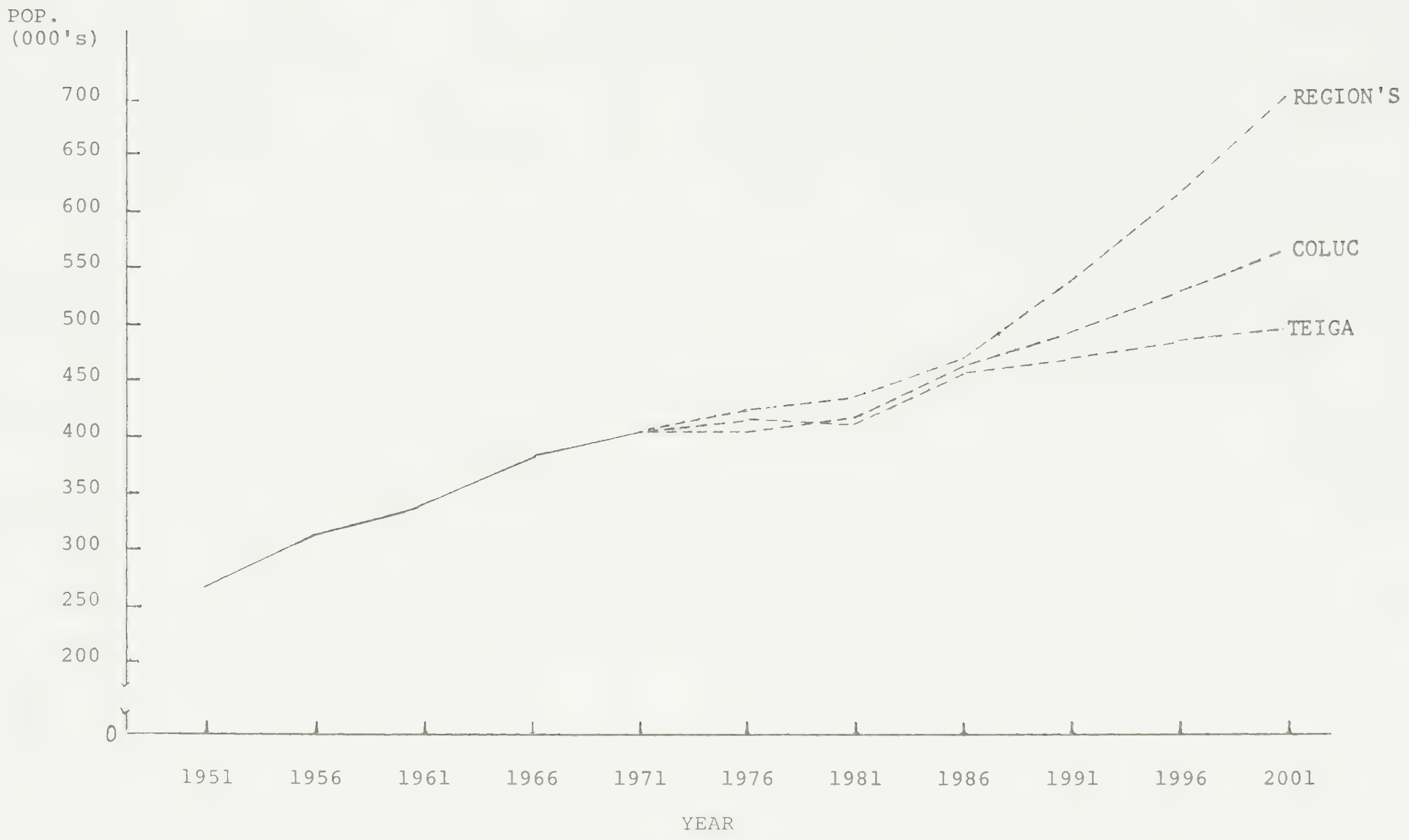

Table A-4

COMPARATIVE GROWTH RATES, POPULATION TARGETS AND ASSUMPTIONS OF THREE EXISTING PROJECTIONS (1971-2001)

YEARS	ANNUAL GROWTH RATES			POPULATION AFTER EACH FIVE YEAR SPAN			ASSUMPTIONS		
	TEIGA	COLUC	REGION	TEIGA	COLUC	REGION	TEIGA	COLUC	REGION
1971-1976	0.8%	1.0%	1.2%	418.9	422.4	413.4	Trend component approach assuming continued decline in growth rates 1. Medium fertility decreasing from 2.22 in 1971 to 1.98 in 2001 2. 50,000 net external migration per year to province 3. Internal provincial migration at 0.27% of Ontario's population	Policy based projection assuming bulk of COLUC area's growth will be deflected east of Metro Toronto to 1986. Beyond 1986, the Hamilton area will grow faster due to an inevitable overflow from the Metro Toronto area.	Based on past demographic trend and an anticipated increase in key components. Assessment population is used as base.
1976-1981	0.8%	1.0%	1.2%	437.5	443.9	438.7			
1981-1986	0.8%	1.0%	1.2%	455.6	466.8	465.2			
1986-1991	0.5%	2.7%	1.8%	470.4	532.2	492.5			
1991-1996	0.5%	2.7%	1.7%	481.3	606.7	521.1			
1996-2001	0.5%	2.7%	1.7%	489.6	691.6	551.1			

Of these three projections, TEIGA'S was selected as the most likely to occur for two basic reasons:

1. TEIGA'S projection was formulated within a larger Provincial growth context and maintains the historic growth relationship between the Region and the Province. Since 1956, as shown in the previous section, the Region and Province have had declining growth rates with the Province consistently higher. If one goes even further back (to 1921), the picture is one of consistency in the direction of growth rates if not in which is growing faster.

Table A-5

GROWTH RATES OF PROVINCE AND REGION DECREASED AND INCREASED SIMULTANEOUSLY

Years	Province	Region
1921-31	1.6%	2.2%
1931-41	.9%	.7%
1941-51	1.9%	2.6%
1951-61	3.1%	2.8%
1961-71	2.1%	1.4%

While the differences in the projections are not great until 1986, both COLUC and the Region predict a major upswing in the growth rate (2.7% and 1.7% respectively) after 1986 while two forecasts prepared for the Province by TEIGA and Statistics Canada based on a trend component approach project a further

growth rate decline from 1986-2001.

- TEIGA[*] - 1.6% to 1986; 1.2% to 2001
- Statistics Canada[**] - 1.8% to 1986; 1.4% to 2001

2. TEIGA's trend component basis is supported by recent demographic trends and developments. The major component of growth is natural increase. The Provincial fertility rate has continued to drop since 1971 (2.22) to 1.96 in 1973. TEIGA's fertility assumptions range from 2.22 to 1.98 between 1971 and 2001. Regionally, the number of births in Wentworth county has declined from 6,089 in 1971 to 5,809 in 1973 while marriages increased from 3,585 in 1971 to 3,645 in 1973.[***] The marriage rate (per 1,000 population) provincially is still slowly increasing (9.1 in 1973) after its decline in the fifties and early sixties. In other words, the "baby boom" population is getting married (although not at the same rate as their parents) but not having many children. Therefore, the expected "echo baby boom" has not yet occurred and a great deal of controversy exists over whether or not it will occur:

   - have couples decided not to have children
   - or to have fewer children
   - or are couples just postponing having children

   Assuming the fertility rate remains at its current low level or even decreases further, the growth projected by the COLUC and Regional forecasts would have to occur by net migration to the Region large enough to compensate for the low natural increase. This is

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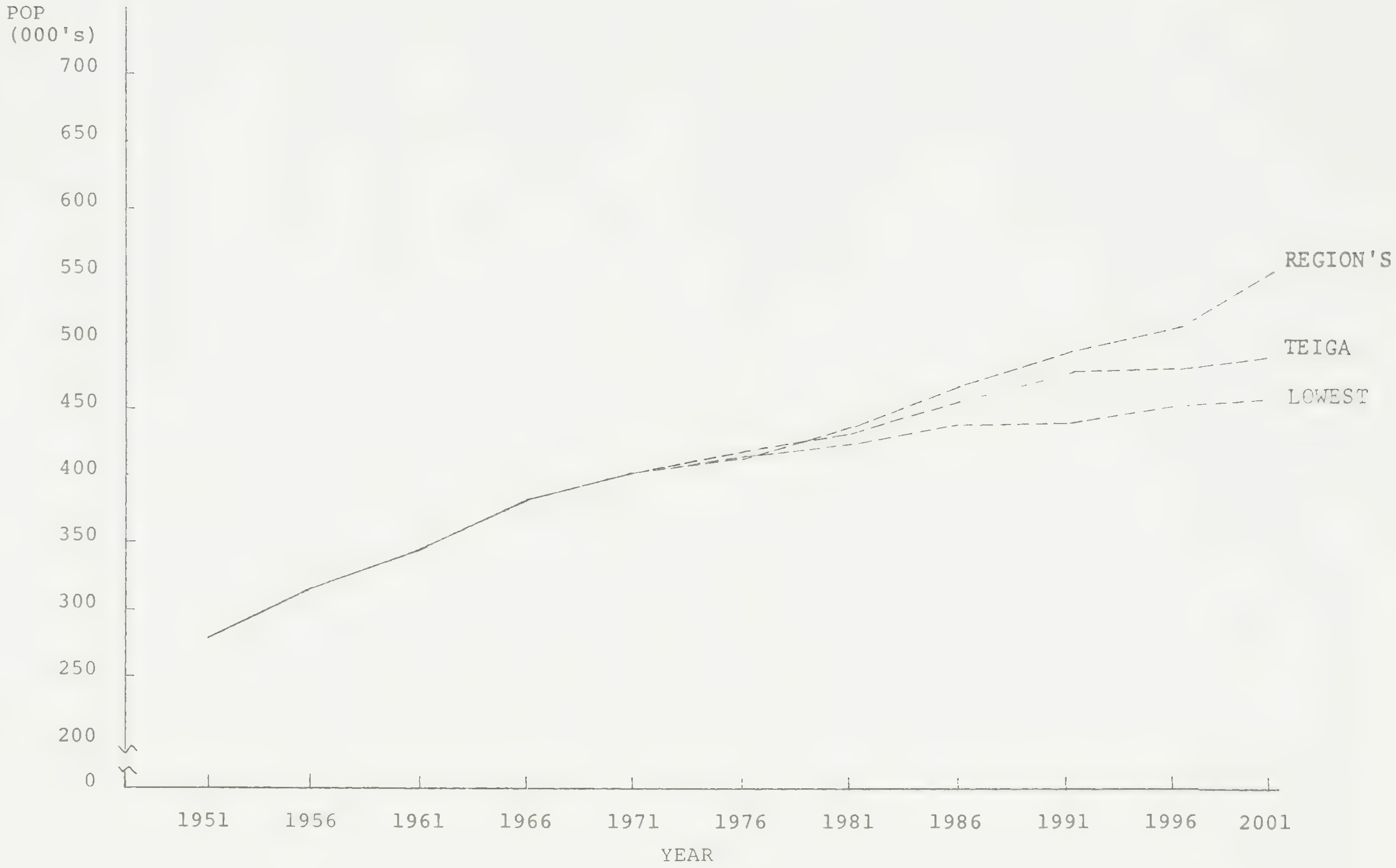
[*] *source: TEIGA, ONTARIO STATISTICAL REVIEW, 1973*

[**] *source: STATISTICS CANADA, Population Projections to 2001 (1974), Projection "B"*

[***] *source: VITAL STATISTICS 1973*

Exhibit A-2

THREE POPULATION PROJECTIONS FORM BASES FOR HOUSEHOLD FORECASTS



COLUC'S assumption past 1986 - that the Hamilton area will receive an overflow population from a filled-to-capacity Metro Toronto after a period of population deflection to the East of Metro. However, there is, as yet, no evidence to indicate implementation of the COLUC policy.

FUTURE PROJECTIONS

With the TEIGA projection (hereafter referred to as the TRENDS projection) selected as the most likely to occur based on a continuation of current demographic trends, it was considered appropriate to pose two alternative projections as well:

1. Lowest - assuming current trends of declining growth accelerate. Annual growth rates of .6% for 1971-86 and .3% for 1986-2001 were employed (.2% below the Trends projection)
2. Regional projection (preliminary) for the Official Plan - a higher projection assuming the Region can implement its growth policies with annual rates of 1.2% to 1986 and 1.7% to 2001.

Exhibit A-2 graphically presents the three alternative projections upon which the household forecasts were based while Table A-8 compares the absolute increases.

Table A-6

ABSOLUTE POPULATION INCREASES UNDER THREE ALTERNATIVE PROJECTIONS (000's)

PROJECTION	YEAR						
	1971*	1976	1981	1986	1991	1996	2001
Lowest							
- Total	401.9	413.9	426.3	439.1	445.7	452.4	459.3
- Increase	18.7	12.0	12.4	12.8	6.6	6.7	6.9
Teiga							
- Total	401.9	418.9	437.5	455.6	470.4	481.3	489.6
- Increase	18.7	17.0	18.6	18.1	14.8	10.9	8.3
Regional							
- Total	395.1**	413.4	438.7	465.2	492.5	521.1	551.1
- Increase	24.3	18.3	25.3	26.5	27.3	28.6	30.0

* *actual census population; increase is from 1966-71*

** *actual assessment population; increase is from 1966-71*

B. HOUSEHOLDS

This section deals with our approach to converting the population projections into total households and disaggregating total households by age of head.

PROJECTING TOTAL HOUSEHOLDS

In our approach to converting population into households, the key factor is the number of persons per household. Having projected the number of persons per household, we divided the population in each forecast year by that number to get total households.

Therefore, it is important to understand the trend in persons per household (PPH), the reasons for it, and its impact on household growth.

1. The PPH in the Hamilton-Wentworth Region have been declining since 1961. As with the various population trends in the preceding section, this phenomenon has been occurring Provincially and internally within the Region. Table A-7 shows an identical trend in all relevant areas.

Table A-7

PERSONS PER HOUSEHOLD ON THE DECLINE (1961-1971)*

Year	Province	CMA	Region	City
1961	3.8	3.8	3.8	3.6
1966	3.6	3.6	3.6	3.4
1971	3.4	3.4	3.4	3.2

* *Source: Census for 1961, 1966, 1971*

2. Demographic as Well as Socio-Economic Factors Have Contributed to the Decline of Persons per Household. It would be difficult to draw a straight cause and effect line resulting in the decline of PPH. The various factors interact but for the sake of some clarity, they will be discussed separately.

- The declining fertility rate after a high of 3.81 in 1960 compared to 2.22 in 1971 has not only resulted in a slower growing population but also resulted in fewer children and therefore persons per household.
- The percentage of non-family households (generally smaller than family households) has risen as the two age groups (15-24 and 65+) most likely to form non-family households have not only increased as a percentage of the total population but each has also increased in the propensity to form households due to a favorable economic and social climate. The rising divorce rate has also contributed since, for every family household affected, either two non-family (no children involved) or one family and one non-family household result.
- The overall propensity to form households has increased. When the ratio of households to population increases, the only possible effect is smaller households since there are fewer "non-head" members of households to spread around among the increased number of household heads.

Table A-8 combines these various factors to give an overall perspective of their interrelationships. In some cases, figures are available only for the Province (fertility, divorce). Where available for both the Region and the Province, both are given to show the larger scope of these trends.

Table A-8

SOCIO-DEMOGRAPHIC TRENDS CONTRIBUTING TO DECLINE OF PERSONS PER HOUSEHOLD IN THE REGION AND PROVINCE (1961-1971)

Years	Ontario Fertility Rate	Percentage of Non-Family Households		Percentage Population Aged 15-24		Propensity of 15-24 Pop. to Form Households	Percentage Population Aged 65+		Propensity of 65+ Pop. to Form Hslds.	Ontario Divorce Rate /100,000 Pop.	Overall Propensity to Form Households of Total Population	
		Ont.	Reg.	Ont.	Reg.	Ontario*	Ont.	Reg.	Ontario*		Ontario	Region
1961	3.74	13.2%	12.3%	13.2%	12.6%	.075	8.2%	8.2%	.534	43.9	.263	.267
1966	2.79	16.1%	14.8%	15.6%	15.6%	.086	8.2%	8.2%	.553	58.9	.270	.277
1971	2.22	18.0%	18.3%	18.0%	18.1%	.109	8.4%	8.8%	.566	158.5	.289	.297

* *Regional propensities for age groups in 1961 and 1966 not available without special census cross-tabulations prepared by Statistics Canada. Kirkland in DEMAND FOR HOUSING (Revised 1973) prepared age group propensities for the Hamilton CMA which also show an increased propensity (or ratio of households to population) in the two age groups*

Year	*Age*	
	15-24	*65+*
1961	*.071*	*.484*
1966	*.092*	*.523*
1971	*.109*	*.561*

Since we have cross-tabulations of household characteristics prepared for 1971, those Regional figures are available: .114 for 15-24 age group and .562 for 65+ age group.

3. As a result of fewer persons per household, the decline in household growth has not been as great as that in population growth. Table A-9 below compares the annual growth rates from 1951-71 for the population and households in the Region.

Table A-9

REGIONAL POPULATION GROWTH RATE DECLINED FASTER THAN HOUSEHOLD GROWTH RATE (1951-1971)*

Years	Population Growth Rate	Household Growth Rate
1951-56	3.8%	3.8%
1956-61	2.1%	1.9%
1961-66	1.9%	2.7%
1966-71	1.0%	2.4%
1951-71 Absolute decline	2.8%	1.4%

With the foregoing trends in mind, persons per household were projected to decrease further to 1986, very slightly to 1991, levelling out at that point to 2001. This further decline is based on current evidence that the trends will continue, at least until 1986.

- fertility rate is still dropping from 2.2 in 1971 to 1.96 in 1973

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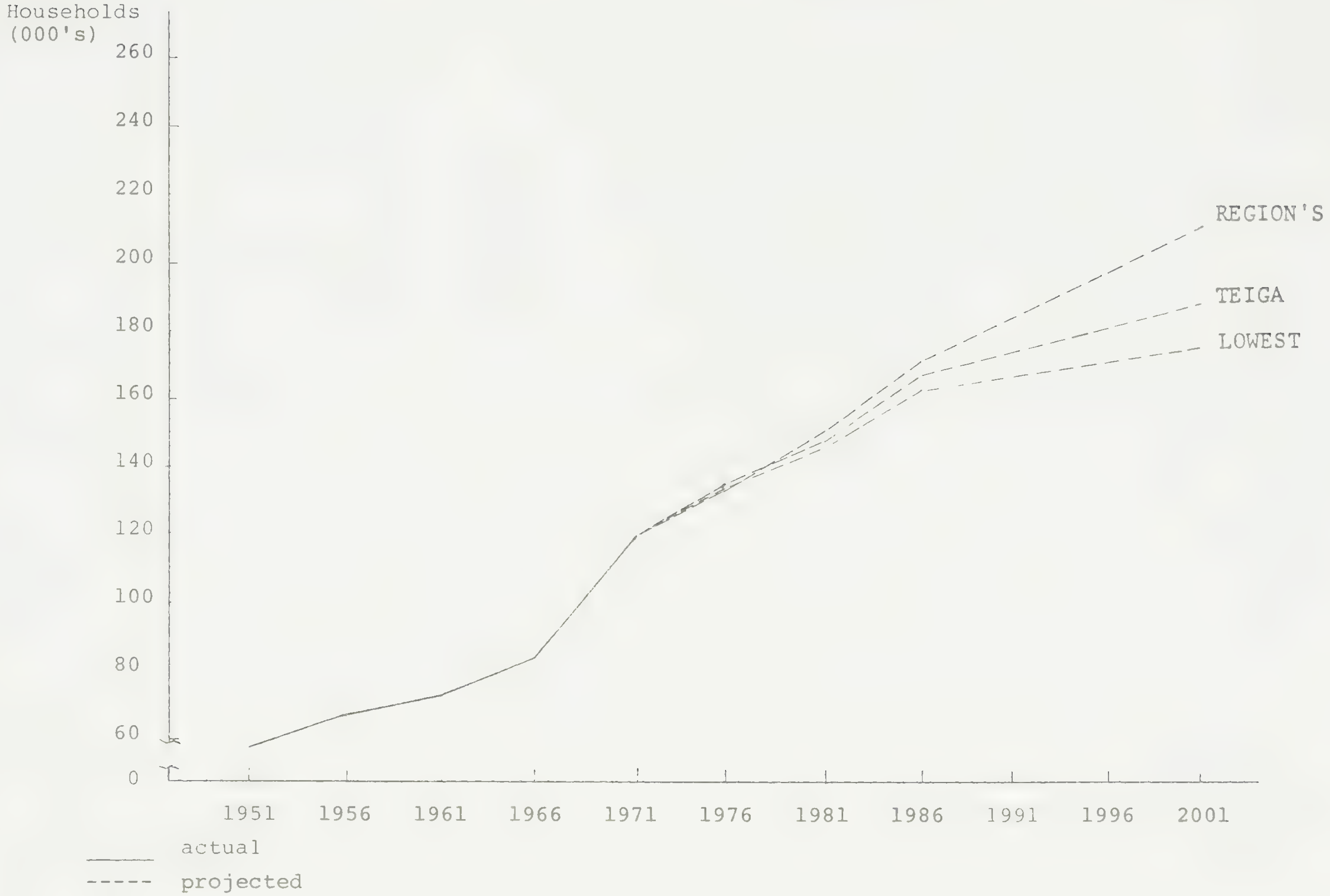
* *actual census*

Exhibit A-3

THREE ALTERNATIVE TOTAL HOUSEHOLDS PROJECTING (1971 - 2001) FOR HAMILTON-WENTWORTH REGION



- divorce rate is still increasing from 158.5 in 1971 to 173.6 in 1973
- non-family households are expected to increase as a percentage of the population since the 15-24 year age group will not peak until 1981 and will continue to be a strong force for some time after that
- the other prime household formation age group (25-34) is projected to peak around 1986 continuing the "baby boom" maturation process

Therefore, we are projecting the persons per household in the Region to decrease to 3.1 in 1976, 2.9 in 1981 and 2.7 in 1986. From 1991 to 2001, a figure of 2.6 was projected. Applying these figures to the appropriate population levels in each of the years for the three projections, the following total households are forecast. (Tables A-10, A-11, A-12) Exhibit A-3 presents the three alternative household growth projections graphically.

Table A-10

TOTAL REGIONAL PROJECTIONS FOR LOWEST POPULATION FORECAST

					YEAR				
	1971		1976		1981		1986		2001
Population (000's)	401.9		414.1		426.7		439.6		459.8
Annual Population Growth Rate		0.6%		0.6%		0.6%		0.3%	
Persons/Household	3.4		3.1		2.9		2.7		2.6
Total Households (000's)	119.6		133.6		147.1		162.8		176.8
Household Increase (000's)		14.0		13.5		15.7		14.0	
Annual Household Growth Rate		2.2%		2.0%		2.0%		0.5%	

Table A-11

TOTAL REGIONAL PROJECTIONS FOR TRENDS POPULATION FORECAST

	Year								
	1971		1976		1981		1986		2001
Population (000's)	401.9		418.9		437.5		455.6		489.6
Annual Population Growth Rate		0.8%		0.8%		0.8%		0.5%	
Persons/Household	3.4		3.1		2.9		2.7		2.6
Total Households (000's)	119.6		135.1		150.9		168.7		188.3
Household Increase (000's)		15.5		15.8		17.8		19.6	
Annual Household Growth Rate		2.5%		2.2%		2.3%		0.7%	

Table A-12

TOTAL REGIONAL PROJECTIONS FOR REGIONAL (OP) POPULATION FORECAST

	Year								
	1971		1976		1981		1986		2001
Population (000's)	395.1		413.4		438.7		465.2		551.1
Annual Population Growth Rate		1.2%		1.2%		1.2%		1.7%	
Persons/Household	3.4		3.1		2.9		2.7		2.6
Total Households (000's)	116.2		133.3		151.3		172.3		212.0
Household Increase (000's)		17.1		18.0		21.0		39.7	
Annual Household Growth Rate		2.9%		2.7%		2.8%		1.5%	

PROJECTED AGE DISTRIBUTION OF HOUSEHOLD HEADS

Having projected the growth in total households, the next step was to disaggregate this total by age of household head to 1986. This was necessary to understand from which segment of the population the greatest future demand for housing would occur.

Our primary source for this task was Kirkland's DEMAND FOR HOUSING TO 1986 (Revised, 1973), CMHC. Since his age distribution of households was prepared for the Hamilton CMA, several preliminary steps were required to adjust this percentage distribution for the Region.

1. Special cross-tabulations were prepared by Statistics Canada giving us the actual household head age distribution for the Region.
2. The census propensities derived from dividing households by age of head by the population in that age category for the CMA were compared to Kirkland's reliability. Table A-13 shows the results of this analysis. The propensities from the two sources (census cross-tabulations and Kirkland) were either identical or close enough for us to proceed with Kirkland's projections.
3. Since the age distribution was likely to be different between the CMA and the Region, we calculated the 1971 percentages for each age group and recorded the Regional deviation from the CMA (See Table A-14).

4. Finally, for each projection year we applied Kirkland's percentages (adjusted by the 1971 deviation for the Region) to the three projected total household bases. (Tables A-15, A-16, A-17). Our basic assumption here was that the relationship between the CMA and Region in their household age distribution would not change significantly to 1986.

Table A-13

COMPARATIVE PROPENSITIES TO FORM HOUSEHOLDS BY AGE OF HEAD - KIRKLAND AND CENSUS ACTUAL FOR CMA, 1971

Age of Head	Population (000's)	Census* Propensities	Kirkland Propensities
15-24	88.0	.110	.109
25-34	66.3	.446	.447
35-44	63.3	.503	.500
45-54	58.3	.518	.518
55-64	40.3	.551	.555
65+	40.8	.560	.561

* *Special cross-tabulations, Statistics Canada, 1971*

Table A-14

ACTUAL 1971 CENSUS* PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY AGE OF HEAD FOR THE CMA AND REGION AND PERCENTAGE DEVIATION OF THE REGION FROM THE CMA

Age of Household Head	CMA	REGION	
	% of Total Households	% of Total Households	% Deviation from CMA
15-24	6%	7%	+1%
25-34	20%	19%	-1%
35-44	22%	21%	-1%
45-54	21%	20%	-1%
55-64	15%	16%	+1%
65+	16%	17%	+1%

* *Statistics Canada*
Special cross-tabulations, 1971

Table A-15

HAMILTON-WENTWORTH REGION

TOTAL HOUSE HOLDS BY AGE OF HEAD PROJECTED TO 1986

LOWEST FORECAST

AGE OF HOUSEHOLD HEAD	1971 Actual			1976		1981		1986		INCREASE
	(000's) House-Holds	% of Total	Pro pensity	(000's) House-Holds	% of Total	(000's) House-holds	% of Total	(000's) House-holds	%of Total	1971-1986 000's and %
15 - 24	8.3	7%	.114	9.4	7%	10.3	7%	11.4	7%	3.1 (2.1%)
25-34	22.9	19%	.441	30.7	23%	38.3	26%	47.2	29%	24.3 (4.9%)
35-44	24.8	21%	.502	22.7	17%	25.0	17%	27.7	17%	2.9 (0.7%)
45-54	24.5	20%	.510	26.7	20%	23.5	16%	21.2	13%	-3.3 (-1.0%)
55-64	19.2	16%	.559	21.4	16%	23.5	16%	26.0	16%	6.8 (2.1%)
65+	19.9	17%	.562	22.7	17%	26.5	18%	29.3	18%	9.4 (2.6%)
TOTAL	119.6	100%	.297	133.6	100%	147.1	100%	162.8	100%	43.2 (2.1%)

Table A-16

HAMILTON - WENTWORTH REGION

TOTAL HOUSEHOLDS BY AGE OF HEAD PROJECTED TO 1986

TEIGA FORECAST

AGE OF HOUSEHOLD HEAD	1971 Actual			1976		1981		1986		INCREASE
	(000's) House-Holds	% of Total	Pro-Pensity	(000's) House-Holds	% of Total	(000's) House-Holds	%of Total	(000's) House-Holds	% of Total	1971-1986 000's and %
15 - 24	8.3	7%	.114	9.4	7%	10.6	7%	11.8	7%	3.5 (2.4%)
25-34	22.9	19%	.441	31.1	23%	39.2	26%	48.9	29%	26.0 (5.2%)
35-44	24.8	21%	.502	23.0	17%	25.7	17%	28.7	17%	3.9 (1.0%)
45-54	24.5	20%	.510	27.0	20%	24.1	16%	21.9	13%	-2.6 (-0.7%)
55-64	19.2	16%	.559	21.6	16%	24.1	16%	27.0	16%	7.8 (2.3%)
65+	19.9	17%	.562	23.0	17%	27.2	18%	30.4	18%	10.5 (2.9%)
TOTAL	119.6	100%	.297	135.1	100%	150.9	100%	168.7	100%	49.1 (2.[illegible])

HAMILTON - WENTWORTH REGION

Table A-17

TOTAL HOUSE HOLDS BY AGE OF HEAD PROJECTED TO 1986

REGIONAL FORECAST

AGE OF HOUSEHOLD HEAD	1971 Actual			1976		1981		1986		INCREASE
	(000's House Holds	% of Total	Pro-Pensity	(000's) House-Holds	% of Total	(000's) House-Holds	% of Total	(000's) House-Holds	% of Total	1971-1986 000's and %
15-24	8.1	7%	.114	9.3	7%	10.6	7%	12.1	7%	4.0 (2.7%)
25-34	22.1	19%	.441	30.6	23%	39.3	26%	50.0	29%	29.8 (5.5%)
35-44	24.4	21%	.502	22.7	17%	25.7	17%	29.3	17%	4.9 (1.3%)
45-54	23.2	20%	.510	26.7	20%	24.2	16%	22.4	13%	-0.8 (-0.2%)
55-64	18.6	16%	.559	21.3	16%	24.2	16%	27.6	16%	9.0 (2.7%)
65+	19.8	17%	.562	22.7	17%	27.2	18%	31.0	18%	11.2 (3.0%)
TOTAL	116.2	100%	.297	133.3	100%	151.3	100%	172.3	100%	58.4 (2.8%)

APPENDIX B

ANALYSIS OF HOUSING STOCK

The purpose of this appendix is to review changes that have occurred to the housing stock of the Region in the past ten years including: types of units constructed, number of assisted units, and the quality of housing. In addition a section has been included on likely future short term supply as indicated by the plans of the industry.

CURRENT HOUSING STOCK AND TRENDS

Using the 1971 Census as the base Table 8.9 we have estimated the June 1975 housing by updating with the use of building permits as reported in Statistic Canada 64-203 Building Permits Annual Summary.* In order to convert building permit issuances to actual construction we have assumed that:

- there was a six month lag between issuance and construction completions for singles, doubles and row housing and a twelve month lag for apartments
- 1% of building permits were not constructed
- 90% of demolitions were single family housing, 10% flats and apartments
- all conversions were from single to double dwellings.

Table B.1 presents the results of these calculations in the form of the estimated June, 1975 housing stock by type.

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* *A complete listing of these figures is appended to this appendix.*

TABLE B-1

ESTIMATED HOUSING STOCK BY TYPE JUNE 1975

THE REGIONAL MUNICIPALITY OF HAMILTON-WENTWORTH

	SINGLE	SEMI/DUPLEX	ROW	APT.	TOTAL
Hamilton	56,880 (52%)	10,120 (9%)	4,980 (5%)	36,880 (34%)	108,860
Stoney Creek	6,830 (76%)	560 (6%)	120 (1%)	1,420 (16%)	8,930
Flamborough	5,720 (82%)	180 (3%)	40 (1%)	1,020 (15%)	6,960
Dundas	4,090 (67%)	390 (6%)	260 (4%)	1,390 (23%)	6,130
Ancaster	3,810 (93%)	150 (4%)	40 (1%)	80 (2%)	4,080
Glanbrook	2,670 (93%)	140 (4%)	20 (1%)	30 (1%)	2,860
TOTAL	80,000 (58%)	11,540 (8%)	5,460 (4%)	40,820 (30%)	137,820

These estimates have also been corrected to account for the boundary changes that occurred with the formation of regional government, these included:

Flamborough - loss of 500 units to the Regional Municipality of Waterloo, and 400 units to Dundas

Dundas - gained 400 units from Flamborough and 70 units from Ancaster

Ancaster - loss of 70 units to Dundas

- Hamilton and Dundas are the only communities with a complete range of housing type In both of these communities single household units account for the bulk of housing but multiples have become increasingly important.

	% of Total Units-1975	
	Hamilton	Dundas
single	52%	67%
semi & duplex	9%	6%
row	5%	4%
apartment	34%	23%

During the past 10 years in these two communities new units constructed have had the following composition.

	Additions to Housing Stock 1964-74	
	Hamilton	Dundas
single	25%	54%
semi & duplex	3%	1%
row	4%	8%
apartment	68%	37%

- In the rest of the Region single detached units account for over 76% of the Housing stock. The majority of additions to housing stock during the 1964-74 period have been single detached, with the exception of Stoney Creek where a large number of apartment units have been built during the past ten years.

	% of Total 1975 Stock			
	Single	Semi/Duplex	Row	Apt.
Stoney Creek	76%	6%	1%	16%
Flamborough	82%	3%	1%	15%
Ancaster	93%	4%	1%	2%
Glanbrook	93%	4%	1%	1%

	Additions to Housing Stock (1964-74)			
	Single	Semi/Duplex	Row	Apt.
Stoney Creek	45%	2%	-	53%
Flamborough	80%	1%	-	19%
Ancaster	99%	1%	-	1%
Glanbrook	99%	-	-	1%

- In keeping with the decline in single detached units, there has been a continued decline of ownership. This phenomenon has been particularly prevalent in the City where ownership has declined from 69% in 1961 to 58% in 1971 and an estimated 57% in 1975. However the tenure of newly constructed residential units in the City would indicate that this trend may be reversing.

	% Owned of New Construction	% Rental of New Construction
1972	35%	65%
1973	35%	65%
1974	45%	55%
1975	55%	45%

This shift has resulted from the increase in multiple ownership opportunities which has occurred since the introduction of the Condominium Act. In the rest of the Region current construction activity indicates that the ownership rental mix has remained close to the 1971 level of 80/20, decline from the 1961 figure of 85/15.

- The Region's supply of assisted units is found almost exclusively in the City of Hamilton. As well as having the greatest diversity of housing stock the city also has the largest portfolio of assisted units. Currently these are estimated as follows:

		# of units
public housing under management		
	family	2432
	senior	1799
rent supplement		378
community integrated		39
limited dividend		1400

As the table on the following page indicates, many of these units have been added in recent years.

Hamilton City Public Housing Completions*

	Family	Senior	Totals
1951-69	1677	759	2436
1970	181	397	578
1971	324	199	523
1972	110	200	310
1973	38	-	38
1974	78	-	78
1975 (May)	24	244	268
Housing Total	2432	1799	4231

Both the Rent Supplement and Integrated Community Programs are relatively new and these units have been added in the last 18 months. Of the Limited Dividend units 740 have been added since 1969.

In addition to government housing there are also in Hamilton 70 units for senior citizens that have been provided by community groups.

In the rest of the Region only Stoney Creek has assisted units - 43 public housing units for senior citizens.

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*Source: *Policy and Program Development Secretariat, Ministry of Housing.*

HOUSING QUALITY IN THE REGION

Housing quality in the Region has been assessed by a two step analysis:

1. building inspectors in each municipality were contacted to identify areas of concentrated housing deterioration
2. in each of these areas a windshield survey was undertaken to identify number of units requiring rehabilitation

- Overall the quality of housing has improved in the Region At present there is great interest and activity in private improvement of housing throughout the Region. In addition some areas of concentrated deterioration of housing quality have been removed. The availibility of rehabilitation programs such as the former urban renewal program, the Residential Rehabilitation Assistance Program, and the Ontario Home Renewal Program have further stimulated rehabilitation activity. We estimate that at present there are 2300 units requiring major rehabilitation in the Region (2% of total stock). This is a decline from the Census estimates of 4340 units or 6% in 1951 and 3156 units or 3% in 1961.

- 90% of the units requiring repair are in Hamilton. Of the 2300 units requiring major repair 2100 are in the City. This represents 2% of the present housing stock. The 1961 Census estimated that 2,212 units or 3% of the housing stock needed major repair, a decrease from 1951 when 3,120 units or 6% of the stock needed repair.

- No concentrated areas of poor quality housing could be found in the rest of the Region. However some pockets exist in old cottage areas along Lake Ontario. Otherwise units requiring repair were isolated units scattered throughout the built-up areas and in the rural areas. The 1951 Census indicated that 1,130 units or approximately 8% of the stock required major repair. By 1961 this figure had declined to 944 units or 4% of the existing stock.

- A larger number of units are however eligible for RRAP and OHRP funds. Generally the repairs required are of a minor nature. The major problem is that the age of many units necessitates that replacement be made of some of the key services such as electrical systems, plumbing and heating. Overall, however, these units are in fair condition and do not create undue hardship for their owners.

LIKELY FUTURE SUPPLY

In order to determine the development activity planned for the short term an analysis was made of the number of lots which have received draft approval in the past year (but not final approval) plus the number of lots which are currently circulating through the approval process. This was accomplished through an analysis of the monthly print-outs of the Plans Administration Branch, Subdivision Section of the Ministry of Housing. Lots with final approval were not counted as available in these numbers. A separate analysis was made of the units which had received final approval

TABLE B-2

LOTS AND UNITS WITH DRAFT APPROVAL SINCE 1974

PLUS PLANS CIRCULATING AND LIKELY TO BE APPROVED*

	Singles & Semis		Townhouses		Apartments		Total
	Draft Approved	Circulating	Draft Approved	Circulating	Draft Approved	Circulating	
Hamilton	1113	1721	158	284	367	512	4155
Stoney Creek	1624	111	220	-	-	-	1955
Flamborough	282	684	-	-	-	-	966
Dundas	179	-	350	-	-	-	529
Ancaster	157	660	-	-	-	-	817
Glanbrook	-	-	-	-	-	-	
Total Region	3355	3176	728	284	367	512	8422

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* *Ministry of Housing, Active Subdivision, Plans Administration Branch Plans which are circulating but have incurred two or more objections from agencies have not been counted.*

but have not been built upon as yet.

Plans of the Ministry of Housing were also assessed in order to determine plans for public housing units.

- Currently there is approximately a three years' supply of units drafted approved and likely to be approved. Lots and units with draft approval in July 1975 plus new plans submitted indicate a short term supply of 8400 units Table B-2. This, however, gives only a partial picture as there are in addition a large number which have been final approved but have not been built upon for longer than six months.

Units Approved But Not Constructed

	Single & Semi	Row	Apt.	Total
Hamilton*	216	949	2450	3615
Stoney Creek**			300	300
Dundas			80	80

When these figures are combined with those of Table B-2 the following housing type totals emerge.

	# of units	% of total
single & semi	6747	54%
row	1961	16%
apartment	3709	30%
TOTAL	12417	

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* *Estimated from Ministry of Housing monthly print-outs and Hamilton neighbourhood maps reflecting building maps.*

***Estimated by local building inspectors and planners*

In Hamilton there are also a number of blocks in the core which are pre-zoned for high rise.

- Construction at present is in keeping with recent experience except for a lack of apartment construction. A comparison was made of construction activity for each of the last three years for the January - June period. When these figures are compared we see that with the exception of apartments current construction activity is healthy.

Permits Issued By Unit Type
for the Hamilton-Wentworth Region
January - August*

	1973	1974	1975
Single	954	1,164	1,088
Semi	124	84	300
Row	215	381	749
Apt.	1,828	1,491	1,111

- Current construction and plans of the Ministry of Housing indicate a further concentration of public housing in Hamilton. At the present time in the Region there are a total of 206 family units and 816 senior units under construction plus 589 family units and 548 senior in the planning phase. With the exception of family units under development in Stoney Creek (71) and Dundas (30) and senior units under development in Ancaster (20) and Dundas (30) the remainder of the units are located in the City of Hamilton.

Statistics Canada 64-001 Building Permits various monthly issues

TABLE B-3

CITY OF HAMILTON

BUILDING PERMITS 1964 - 1975*

YEAR	SINGLE DWELLING	DOUBLE DWELLING	ROW HOUSING**	FLATS & APT.	CONVERSIONS	GROSS TOTAL	DEMOLITIONS	NET TOTAL
1964	1,035	38	-	2,295	-	3,368	(200)	3,168
1965	664	18	-	1,660	-	2,342	(200)	2,142
1966	582	35	-	1,623	5	2,245	215	2,030
1967	879	1	-	2,206	3	3,089	165	2,924
1968	599	4	-	2,374	5	2,982	224	2,758
1969	676	58	-	2,549	14	3,297	252	3,045
1970	595	42	-	1,735	-	2,372	141	2,231
1971	752	238	-	2,874	-	3,864	181	3,683
1972	959	182	425	2,146	3	3,715	242	3,473
1973	947	124	326	2,228	2	3,627	221	3,406
1974	1,187	274	531	2,155	16	4,163	323	3,840
1975 June	293	160	401	686	3	1,543	99	1,444

* *Statistics Canada 64-203 Building Permits Annual 1964-74; 1975 figures from Statistics Canada 64-001 Building Permits monthly.*

***'Row Housing' not a category prior to 1972.*

TABLE B-4

STONEY CREEK

BUILDING PERMITS 1964 - 1975*

YEAR	SINGLE DWELLING	DOUBLE DWELLING	ROW HOUSING**	FLATS & APT.	CONVERSIONS	GROSS TOTAL	DEMOLITIONS	NET TOTAL
1964	83	8	-	351	1	443	4	439
1965	101	2	-	211	-	314	4	310
1966	110	1	-	63	-	174	2	172
1967	142	-	-	190	1	333	2	331
1968	108	10	-	147	1	266	4	262
1969	110	10	-	144	1	265	2	263
1970	46	-	-	228	7	281	2	279
1971	180	-	-	104	1	285	5	280
1972	312	1	-	314	2	629	-	629
1973	293	14	-	180	-	487	6	481
1974	176	-	-	-	-	176	30	146
1975 June	252	52	-	159	-	463	3	460

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* *Statistics Canada 64-203 Building Permits Annual 1964-74; 1975 figures from Statistics Canada 64-001 Building Permits monthly.*

***'Row Housing' not a category prior to 1972.*

TABLE B-5

FLAMBOROUGH

BUILDING PERMITS 1964 - 1975*

YEAR	SINGLE DWELLING	DOUBLE DWELLING	ROW HOUSING**	FLATS & APT.	CONVERSIONS	GROSS TOTAL	DEMOLITIONS	NET TOTAL
1964	85	-	-	4	1	90	?	90
1965	124	-	-	16	-	140	(1)	139
1966	141	-	-	-	1	142	-	142
1967	122	-	-	3	-	125	-	125
1968	132	4	-	67	-	203	-	203
1969	196	5	-	1	3	205	-	205
1970	124	-	-	97	1	222	1	221
1971	177	2	-	67	-	246	1	245
1972	231	2	-	54	3	290	-	290
1973	202	-	-	111	-	313	1	312
1974	211	-	-	-	-	211	2	209
1975 June	134	-	-	-	-	134	-	134

* *Statistics Canada 64-203 Building Permits Annual 1964-74; 1975 figures from Statistics Canada 64-001 Building Permits monthly.*

***'Row Housing' not a category prior to 1972.*

TABLE B-6

DUNDAS

BUILDING PERMITS 1964 - 1974*

YEAR	SINGLE DWELLING	DOUBLE DWELLING	ROW HOUSING**	FLATS & APT.	CONVERSIONS	GROSS TOTAL	DEMOLITIONS	NET TOTAL
1964	165	-	-	-	1	166	(5)	161
1965	71	-	-	24	-	95	(5)	90
1966	99	-	-	-	1	100	5	95
1967	154	-	-	183	1	338	3	335
1968	170	-	-	-	-	170	-	170
1969	90	-	-	25	3	118	1	117
1970	64	-	-	20	-	84	5	79
1971	60	4	-	24	-	88	5	83
1972	35	-	57	240	-	332	1	331
1973	29	6	95	80	-	210	15	195
1974	52	-	-	95	-	147	4	143
1975 June	26	-	-	-	-	26	2	24

* *Statistics Canada 64-203 Building Permits Annual 1964-74; 1975 figures from Statistics Canada 64-001 Building Permits monthly.*

** *'Row Housing' not a category prior to 1972.*

TABLE B-7

ANCASTER

BUILDING PERMITS 1964 - 1975*

YEAR	SINGLE DWELLING	DOUBLE DWELLING	ROW HOUSING**	FLATS & APT.	CONVERSIONS	GROSS TOTAL	DEMOLITIONS	NET TOTAL
1964	38	-	-	-	-	38	(4)	34
1965	54	-	-	3	-	57	(4)	53
1966	87	-	-	-	2	89	5	84
1967	99	-	-	-	-	99	19	80
1968	62	-	-	-	-	62	1	61
1969	47	-	-	-	1	48	3	45
1970	26	-	-	-	-	26	1	25
1971	35	-	-	-	-	35	3	32
1972	28	1	-	-	-	29	4	25
1973	38	-	-	-	-	38	5	33
1974	41	-	-	-	-	41	7	34
1975 June	22	-	-	-	-	22	1	21

* *Statistics Canada 64-203 Building Permits Annual 1964-74; 1975 figures from Statistics Canada 64-001 Building Permits monthly.*

***'Row Housing' not a category prior to 1972.*

TABLE B-8

GLANBROOK

BUILDING PERMITS 1964 - 1975*

YEAR	SINGLE DWELLING	DOUBLE DWELLING	ROW HOUSING**	FLATS & APT.	CONVERSIONS	GROSS TOTAL	DEMOLITIONS	NET TOTAL
1964	[illegible]	-	-	-	-	94	(1)	93
1965	[illegible]	-	-	-	-	94	(1)	93
1966	[illegible]	-	-	-	-	55	-	55
1967	[illegible]	-	-	-	-	79	1	78
1968	[illegible]	-	-	1	-	81	1	80
1969	[illegible]	-	-	-	-	81	-	81
1970	[illegible]	-	-	-	-	43	-	43
1971	[illegible]	-	-	-	-	73	2	71
1972	[illegible]	-	-	2	1	88	45	43
1973	[illegible]	[illegible]	-	-	-	82	-	82
1974	[illegible]	-	-	-	-	55	-	55
1975 June	[illegible]	-	-	2	-	39	2	37

* *Statistics Canada 64-203 Building Permits Annual 1964-74; 1975 figures from Statistics Canada 64-001 Building Permits Monthly.*

***'Row Housing' not a category prior to 1972.*

TABLE B-9

DWELLINGS BY STRUCTURAL TYPE

1971 CENSUS

	Single	Semi	Row	Apartment	TOTAL
Hamilton	53,840	9285	3695	27,770	94,590
Stoney Creek	5,707	546	120	1,110	7,483
Flamborough	5,033	209	35	370	5,647
Dundas	3,515	370	105	940	4,930
Ancaster	3,735	145	40	75	3,995
Glanbrook	2,330	145	25	25	2,525

APPENDIX C

ANALYSIS OF HOUSING COSTS AND INCOMES
HAMILTON-WENTWORTH REGION

Appendices A and B presented our approach to determining the major variables in the Region's housing situation - the actual supply of dwelling units and the current and projected number of households to occupy them. This appendix details our approach to linking the supply and the households through cost. Our purpose is to determine which households as projected to 1986 can and cannot afford housing (rental or purchase) after other basic necessities (food, clothing, etc.) are accounted for.

The basic organization of the appendix is as follows:

1. Cost of Housing
    - trends in rental and purchase
    - current cost conditions
2. Household Incomes
    - trends in average income
    - current situation with fixed incomes
3. Approach to Analyzing
    - updating incomes for households by size and age of head
    - determining budgets for adequate family functioning

  - determining residue income for housing
  - matching residue income with housing costs

4. Forecasting Type of Housing
  - 1976 to 1981
  - 1981 to 1986

5. Long Term Forecasting of Unit Types

COST OF HOUSING

In tracing housing costs and determining the current cost conditions, we have treated Hamilton-Wentworth Region as one housing market area. Given a similar quality neighbourhood and house (or apartment), the costs are constant over the Region. Area differences in average housing costs arise over the fact that neighbourhood and housing qualities differ. For instance, Ancaster has a high percentage of large, single detached homes, few apartments and no multiple ground related units to bring the average cost down. Hamilton City also has large single detached homes but a substantial number of apartments, low cost older homes, and ground related multiples bring the average down. (See Appendix B on Supply for types of units in the Region).

1. Past Trends

To understand what has happened in the purchase housing market over the last 10 years, we traced the costs for three categories of housing:

- New single detached home financed under the NHA once considered the lowest cost purchase home has risen 151% in cost from $16,551 in 1964 to $41,575 in 1974*.

- The average resale home increased 199% in cost from $14,241 in 1964 to $42,528 in 1974**.

- Multiple ground-related homes, or town houses, came on the market in the Region in 1968 and 1969 to replace single-detached NHA bungalows as the lowest cost homes. Using the new single-detached NHA home as the 1964 cost base, in 1969, the new town house represented a 14% cost increase over 5 years ($19,000) and a 100% increase to $32,000 over 10 years in 1974.***

Exhibit C-1 graphically shows the three housing category increases in index form with 1964 the base year. It also indexes the land component costs (302% increase) of the new NHA single detached house which accounted for 58% of the total increase in this house type. (Construction cost per square foot only rose 71% in the 1964-'74 time period.)

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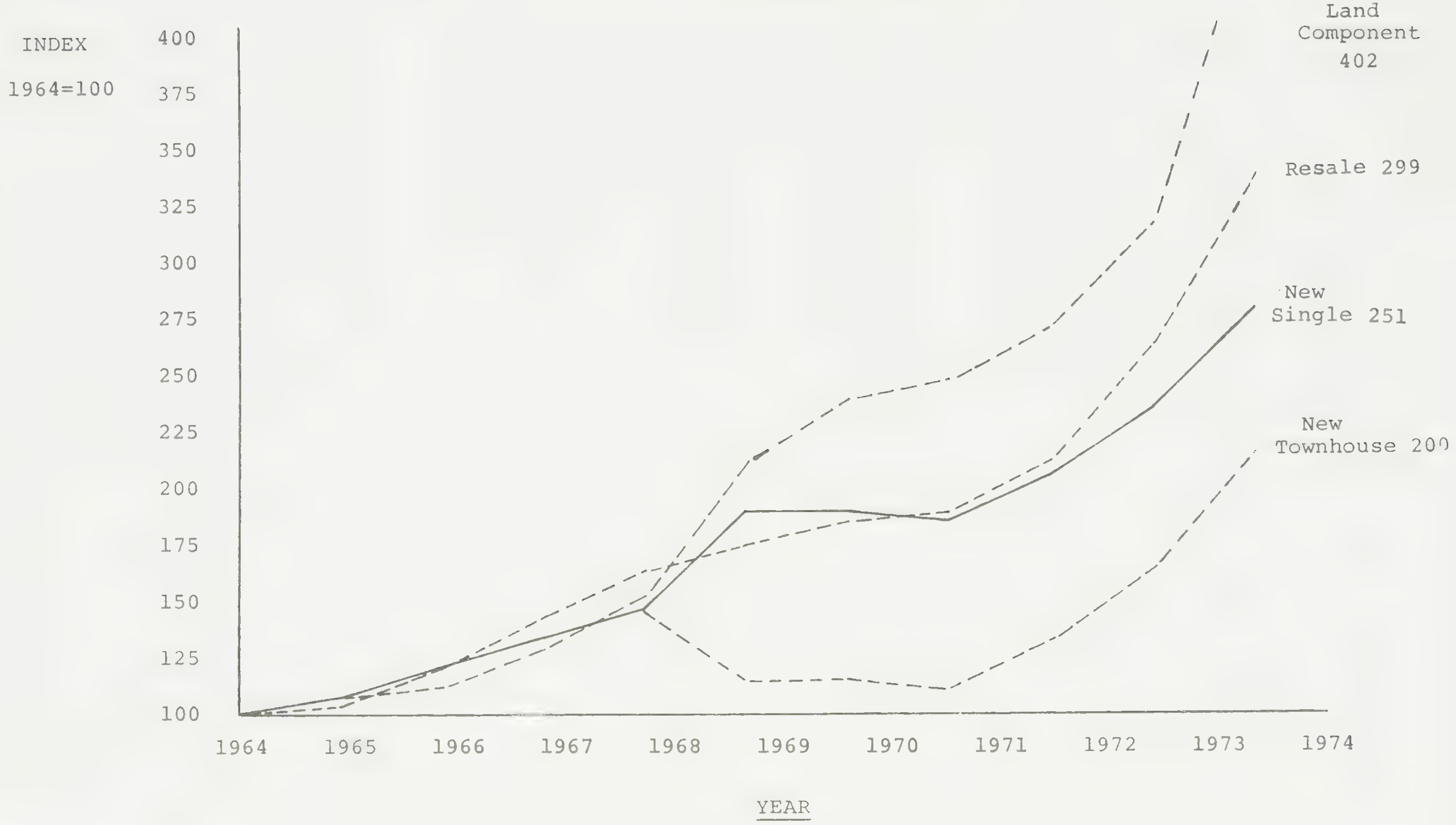
* *Source: Canadian Housing Statistics.*

** *Source: Hamilton Real Estate Board's Multiple Listing Service.*

*** *Source: Interviews with development industry.*

EXHIBIT C-1

COST OF LAND HAS INCREASED MOST OVER 1964-'74



The rental picture over the past 10 years was determined from several sources.

- CMHC's rent survey of vacant units supplied 1974 figures by size of apartments.
- The Spectator, through a random sample of apartment ads, gave us average rents for the base year 1964 and for 1965.
- Housing Market Analysis, 1971, prepared by the Hamilton City Planning Department, quoted rents for 1968 and 1970.

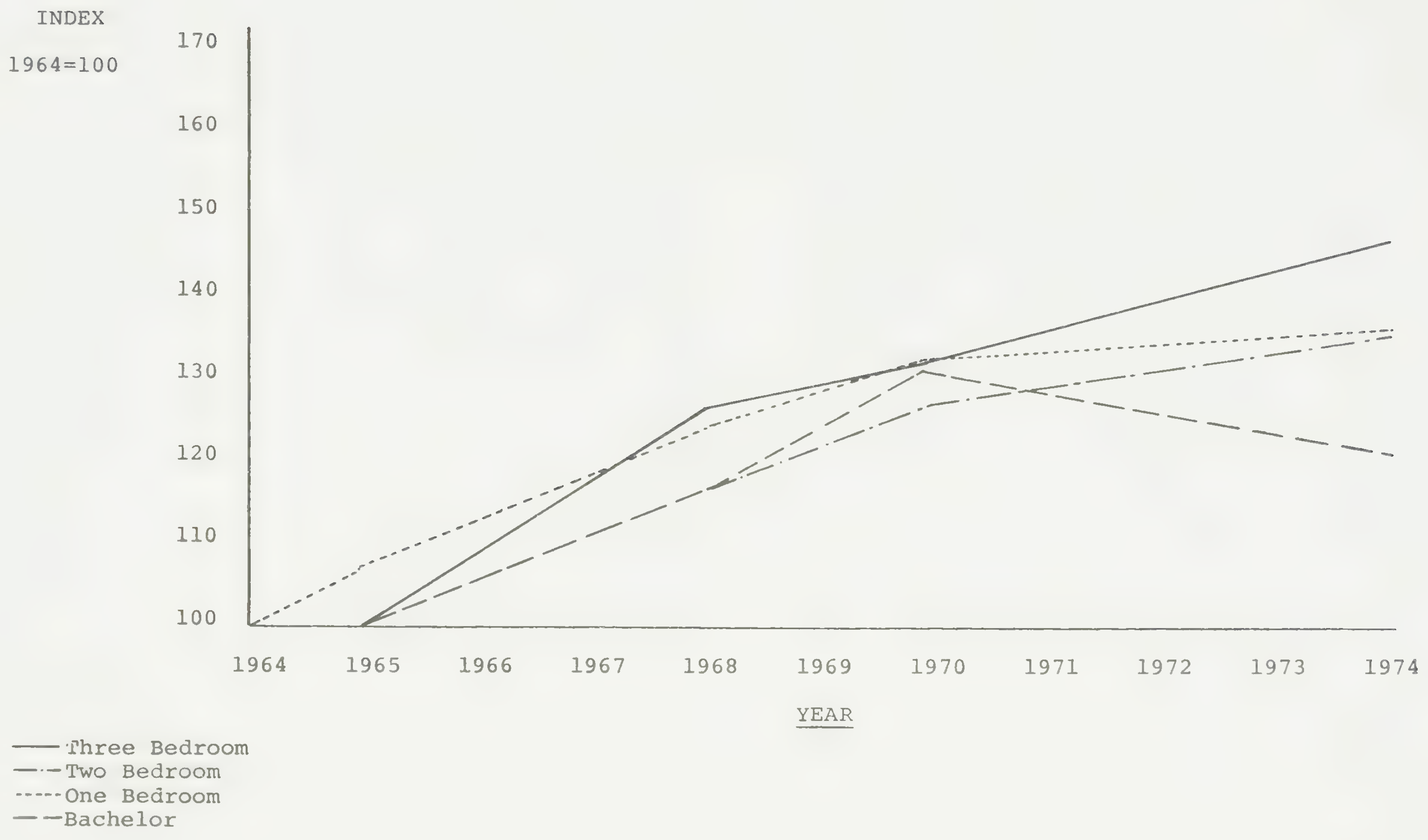
  While rents of vacant units may slightly overstate the average rent being paid at present, they can provide a valid index of the increase.

Such an index was developed showing 1974 rents to have increased only 20% for bachelors, 34% for one and two bedrooms and 73% for three bedroom apartments since 1964 (see Exhibit C-2). For bachelors and one bedrooms the major increase came in the late 1960's with the former dipping and the latter remaining stable until 1974. For two and three bedroom apartments the increases were more evenly spaced over the 10 years.

An apartment construction boom occurred in the Region in the early 1970's which may account for the rent decrease in the bachelors and the stabilization for one bedroom, and to a lesser extent two bedroom apartments. Three bedroom apartments would not necessarily have been affected since they have formed a small percentage of total units in new apartment structures.

EXHIBIT C-2

RENTS DID NOT INCREASE SUBSTANTIALLY FROM 1964 TO 1974



2. Current Cost Conditions

From 1974 to 1975, purchase housing prices continued to rise although the increases were not nearly as great as the cost increases from 1973 to 1974.

- Resale house prices* rose only 4% from 1974 to 1975 while the 1973 to 1974 increase stood at 26%. In index form, the figures were 236 in 1973, 299 in 1974 and 312 in 1975 (1964 base year).

- New townhouses rose 12% from 1974 to 1975 as opposed to an estimated 29% jump from 1973 to 1974. 1975 average price of $36,000 was derived from a survey of Spectator ads and developers and is therefore a reflection of current market prices. The increase raised the price index from 200 in 1974 to 217 in 1975.

- New single detached dwelling (NHA financed) costs are not yet available for 1975 from CMHC. Given the decline in the percentages of cost increases for the other two dwelling categories we can estimate a lower increase in new single detached dwellings from the 1973-'74 increase of 17%. The MLS increase of 4% for 1974-1975 was used to update single detached units to $43,238 with the price index rising to 261 from 251 in 1974.

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* *Source: Multiple Listing Service, Hamilton Real Estate Board.*

TABLE C-1

1973 to 1974 HOUSING PRICE INCREASES MODERATED to 1975

Year	Housing Category								
	Resale			New Single			New Townhouse		
	Cost $(000's)	Index (1964= 100)	% Increase	Cost $(000's)	Index (1964= 100)	% Increase	Cost $(000's)	Index (1964= 100)	% Increase
1973	33.6	236		35.4	214		25.7[e]	155[e]	
			26%			17%			29%[e]
1974	42.5	299		41.6	251		32.0	200	
			4%			4%			12%
1975	44.4	312		43.2[e]	261[e]		36.0	217	

Nationally in April of 1975, Hamilton stood 20th among 66 Canadian cities surveyed by the Royal Trust in the cost of a resale 3 bedroom bungalow in an average neighbourhood. This places Hamilton within the top 30% of the cities surveyed as opposed to the top 29% a year earlier showing a relatively static position for Hamilton's housing prices in a national context.

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e = estimated

To update the costs in the rental housing market, we used CMHC's April, 1975 survey of vacant apartment units and their rents. A survey of property managers and Spectator ads confirmed the reasonableness of using CMHC figures as averages for the Region.

In all size categories, apartment rents have increased substantially over the past year.

- Bachelors - 15% increase (index = 138)
- One bedroom - 14% increase (index = 153)
- Two bedroom - 11% increase (index = 148)

105

- Three bedroom - 10% increase (index = 190)

Disaggregating the (1964/74) rent increase for a compound annual growth rate and comparing these average annual increases to the 1974-1975 increases, one can see a substantial change has taken place in the rental market over the past year.

TABLE C-2

RENTS HAVE INCREASED MORE ON AN
ANNUAL BASIS FROM 1974-'75 THAN FROM
1964-1974

	Average Annual Rent Increase			
	Bachelor	One Bedroom	Two Bedroom	Three Bedroom
1964-74	1.9%	3.0%	3.0%	5.6%
1974-75	15.0%	14.0%	11.0%	10.0%

Despite the rent increases from 1974 to 1975, the Region's rents are generally lower than those found in other large Ontario centres.

TABLE C-3

HAMILTON RENTS LOWER THAN OTHER LARGE ONTARIO CENTRES*

Area	Bachelor($)	Two Bedroom($)	Three Bedroom($)
Hamilton	131	161	193
Kitchener	121	165	203
Ottawa	171	201	248
Windsor	121	155	198
London	138	175	199
Toronto	180	227	322

HOUSEHOLD INCOMES

The latest household income figures for the Region were published in the 1971 Census which reported on 1970 incomes. In 1970, the average household income in the Hamilton-Wentworth Region was $10,678. In addition to tracing the movement of average household income since and before the 1971 census, we also examined the situation facing those on fixed incomes - the elderly and government assistance recipients. assistance recipients.

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* *CMHC vacancy and rent surveys, April, 1975.*

1. Trend in Average Household Income

In order to understand the historic relationship between housing costs and household incomes as well as the current situation in the Region, we developed an approach to indexing household income.

Intercensal income statistics are only available in one source, Statistics Canada's Employment Earning and Hours. From this publication, we traced the Region's average weekly earnings of all employees in the Industrial Composite back to 1964 and forwards to November, 1974. Canadian Statistics on average weekly earnings in June, 1975, were then used to update the Regional figure.

An index was established of the average weekly earnings with 1964 as the base year. This index was applied to the 1970 average household income to back date and update it. Current household incomes may be slightly higher than the index indicates since no allowance was made for any changes in the number of household members in the labour force. Table C-4 shows household incomes have increased on average 52% from 1970 to 1975. Overall, from 1964 to 1975, the increase was 115%. Exhibit C-3 plots the indexed increase for household income against the indexed cost increases in the three housing categories (resales, new singles (NHA), and new townhouses) and in the rental market. New townhouses are almost on par in their level of increase with incomes, while rent increases are well below. Cost increases in new singles and resale homes are well above the increase in average income.

TABLE C-4

AVERAGE INCOMES INCREASED 115% FROM 1964 TO 1975 IN HAMILTON-WENTWORTH REGION

Year	Average Weekly Wages And Salaries ($) (Industrial Composition)*	Index (1964=100)	Average Household Income ($)
1964	94.76	100	7,520
1965	99.27	105	7,896
1966	103.50	109	8,197
1967	109.30	115	8,648
1968	117.24	124	9,325
1969	122.52	129	9,701
1970	135.00	142	10,678
1971	148.50	157	11,806
1972	157.54	166	12,483
1973	169.56	179	13,461
1974	185.86	196	14,739
1975	203.73	215	16,231

2. Current Situation With Fixed Incomes

While a 52% increase in income was estimated since 1970 for the average household in the Region, such an increase would not apply to those households whose heads are not actively participating in the labour force.

- Senior citizens over 65 years of age either on regular pensions with supplementary income or just on GAINS

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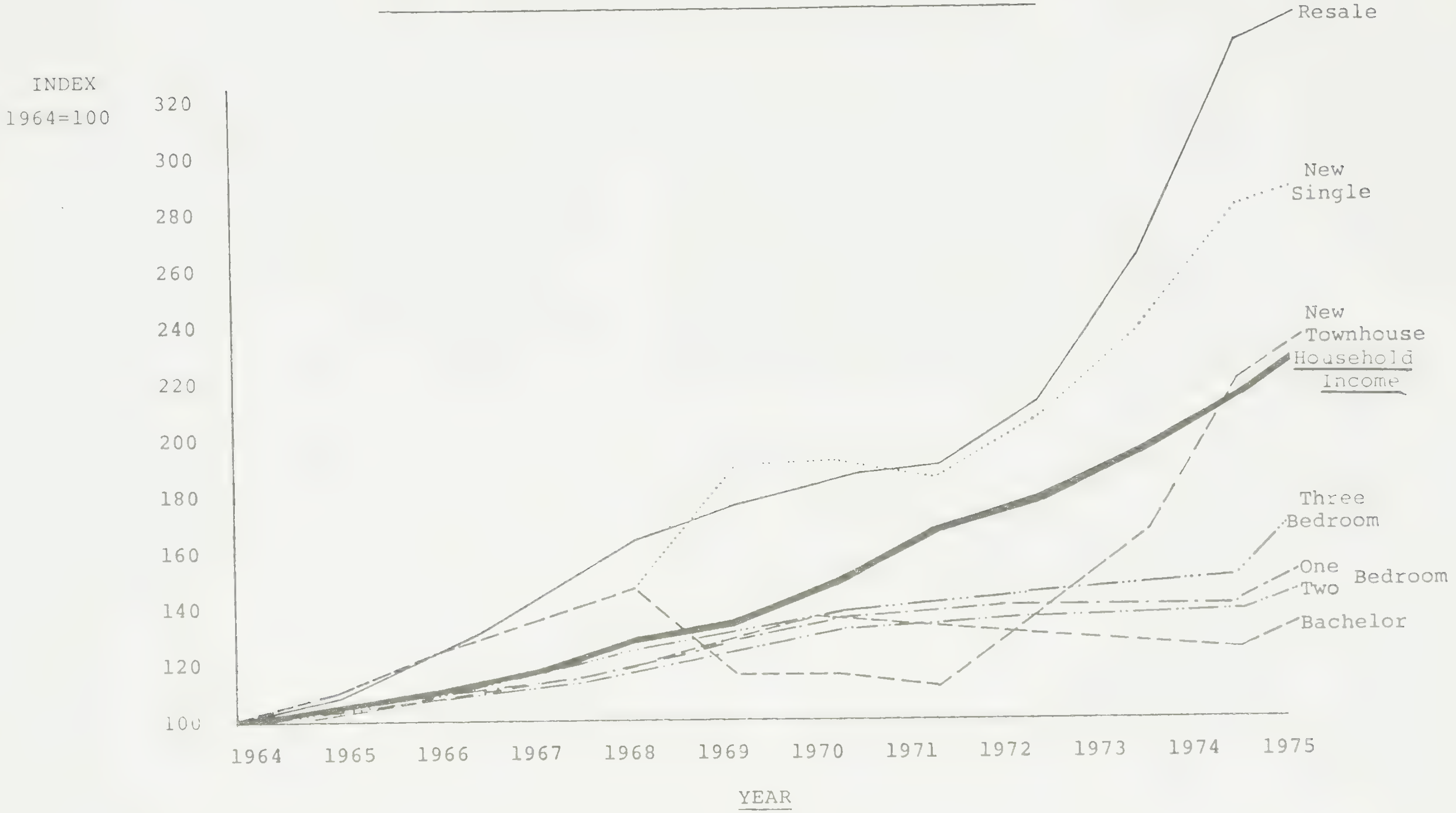
* *Source: Statistics Canada and DBS, catalogues 72-002 and 72-594 respectively EMPLOYMENT EARNINGS AND HOURS. (1968-1975, June figures only).*

EXHIBIT C-3

PURCHASE HOUSING COSTS HAVE TENDED TO RISE FASTER THAN INCOME WHILE RENTAL COSTS HAVE LAGGED BEHIND



- Individuals and families on Government Assistance (including the disabled, recipients of Family Benefit Allowances).

a. Senior Citizens. Since the employment wages and salaries index could not be used to update incomes of those over 65 years of age, we used annual taxation statistics released by the Ministry of Revenue to estimate an annual increase in income. The latest available taxation figures are for 1972. Over the two year period 1970-'72, persons over 65 increased their incomes about 5% annually. This may understate the actual increase to 1975 since there are no available statistics on the impact GAINS has had on the average income of seniors. Until such information becomes available, we have estimated a 28% overall increase since 1970 in incomes for households with heads aged 65 or over.

As of August, 1975, GAINS guarantees a monthly income of $244 for single seniors and $487 for senior couples. This makes the minimum income for most senior households $2,923 and $5,846 respectively (a minority of senior households have more than 2 persons). These figures may change in the next few months since GAINS is generally increased in line with the cost of living index. The disabled of all ages also now receive GAINS.

b. Government Assistance Recipients. The Provincial Government also provides assistance in the form of Family Benefit Allowances to families and individuals

requiring long-term support. The majority are families with children but assistance is also provided for other permanently unemployed and elderly persons not yet old enough for pensions.

The assistance schedule for basic necessities is somewhat complicated varying not only by size of household but also by the composition of adults and children and the ages of the latter. The maximum shelter allowances, however, vary only by size of household or family. In order to get a more comprehensible schedule for setting minimum incomes in the Region, we averaged the monthly allowances for different age structures in the household to come up with an average allowance for each of one to five member households (Table C-5). For those households with children under 18, an additional $22/month/child should be added to the allowances to account for the universal Baby Bonus allowance ($264 per year).

For those on provincial allowances and GAINS, the Region's Social Services Department provides a supplementary shelter allowance with a maximum of $20/month per household or family.* Currently it is estimated that most persons on Family Benefits request this supplementary allowance and qualify for the maximum $20. However, few seniors are now requesting it compared to several years ago, largely because of GAINS and the volume of recent construction in the Region of Senior Citizen Housing.

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* *Source: Interview with official in Social Services Department*

TABLE C-5

MINIMUM INCOMES BY SIZE OF HOUSEHOLD BASED ON FAMILY BENEFIT ALLOWANCES IN THE REGION AS OF SEPT., 1975*

Household Size($)	Basic Necessities($)	Maximum Shelter($)	Total($)
1 Person			
- Monthly	115.00	75.00	190.00
- Annually	1,380.00	900.00	2,280.00
2 Persons			
- Monthly	199.00	130.00	329.00
- Annually	2,388.00	1,560.00	3,948.00
3 Persons			
- Monthly	250.00	135.00	385.00
- Annually	3,000.00	1,620.00	5,184.00
4 Persons			
- Monthly	292.00	140.00	432.00
- Annually	3,504.00	1,680.00	5,184.00
5 Persons			
- Monthly	334.00	145.00	479.00
- Annually	4,008.00	1,740.00	5,748.00

APPROACH TO ANALYZING

Having updated housing costs and incomes, our approach to analyzing the ability of different households to afford housing consisted of the following steps:

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* *Source: Interview with Family Benefits official, Ministry of Community and Social Services.*

1. Applying the 52% average household income increase to the 1971 cross tabulation prepared for us by Statistics Canada of the distribution of the Region's households by income, size of household and age of head. Since there is no intercensal information available on the distribution of households among income categories, we kept the 1971 distribution within the updated income categories. We also assumed an even distribution of households for each household size within each income range since no weighting information is available. For this reason as well, no average incomes by age of household heads could be computed. For the lowest income range, however, we applied the minimum income-government assistance income.

2. Determining the amount of income necessary annually by different sized households (also disaggregated for households headed by a person under 65 and over 65) to afford basic necessities (excluding shelter) for adequate family functioning through the budget approach.

   This approach is based upon a technique developed by the Social Planning Council of Metropolitan Toronto and reported in their report Guides for Family Budgeting. These guides were first established in 1949 and have been updated periodically with the last revised report released in August, 1974.

   The Guide for Family Budgeting presents living costs in the form of budgets covering family food requirements, clothing, home upkeep, health and personal care, transportation and discretionary expenditures such as education, recreation, alcohol, tobacco and others. These budgets are designed in such a way that

budgets can be related to family size, age, sex, occupational and other family circumstances. The "Guides" are more than subsistence standards and represent the budgets needed for normal family functioning.

In previous work undertaken for the Advisory Task Force for Housing Policy in Ontario, the argument was put forth that the Metro Toronto budgets could be applied throughout the province. During that study contact was made with marketing personnel to obtain some indication of variation in the cost of basic necessities across the province. This study concluded that:

- in clothing and home furnishing and supplies, Ontario falls within one price zone
- health care requirements are based on OHIP premium, which are uniform in Ontario
- recreational prices also show no major regional variation in relation to the total cost of basic necessities
- a similar situation existed throughout Ontario in terms of transportation which also has a variation which is insignificant in relation to the total cost of necessities

On the basis of these findings, that study concluded that for practical purposes, the cost of basic necessities excluding housing is constant throughout Ontario. As a result it was felt that the "Guides" developed for Metro Toronto would be suitable for use in the Region of Hamilton-Wentworth.

3. Calculating the residue income for housing of each income category by size of household for household heads under 65 and over. The residue income was determined by calculating after tax income for the top of each income range and subtracting basic necessities.

4. Matching residue incomes with housing costs for each category of household (size, income, heads under and over 65) to determine the type and number of households who could not afford housing. Basic assumptions were made on the minimum cost housing required for each household type:

- HEADS UNDER 65:

Size	Minimum House Type
single	rental bachelor
couple	rental one bedroom
couple with one or two children	purchase townhouse
couple with three or more children	purchase townhouse

- HEADS OVER 65:

Size	Minimum House Type
single	rental bachelor
couple	rental one bedroom
3 or 4 persons	rental two bedroom
5+ persons	rental three bedroom

The results of the four steps outlined above are presented below.

1. Updating 1971 Cross Tabulations.

Applying a 52% income increase to the 1971 census categories results in the following ranges:

- under $7,600
- $7,600 to $15,200
- $15,200 to $22,800
- $22,800 to $30,400
- $30,400+

For household heads 65 and over, a 28% increase was used for the following ranges:

- Under $6,400
- $6,400 to $12,800
- $12,800 to $19,200
- $19,200 to $25,600
- $25,600+

Table C-6 gives the 1971 percentage distribution within each age of head category of households by size and updated income for the Region.

REGIONAL DISTRIBUTION OF HOUSEHOLDS BY SIZE AND INCOME WITHIN AGE CATEGORIES

(1975 Incomes, 1971 Percentage Distribution)

Households By Age and Size	Income Ranges				
	<$7,600	$7,600-$15,200	$15,200-$22,800	$22,800-$30,400	$30,400+
1. HEADS UNDER 25					
- one	8%	5%	-	-	-
- two	9%	22%	16%	2%	-
- three or four	7%	21%	6%	1%	-
- five +	1%	1%	1%	-	-
TOTAL	25%	49%	23%	3%	-
2. HEADS 25-34					
- one	2%	4%	1%	-	-
- two	2%	5%	9%	4%	1%
- three or four	5%	23%	18%	3%	1%
- five +	2%	9%	8%	2%	1%
TOTAL	11%	41%	36%	9%	3%
3. HEADS 35-44					
- one	1%	2%	1%	-	-
- two	1%	3%	3%	1%	1%
- three or four	3%	13%	15%	4%	2%
- five +	3%	16%	20%	7%	4%
TOTAL	8%	34%	39%	12%	7%
4. HEADS 45-54					
- one	3%	3%	1%	-	-
- two	2%	7%	6%	2%	1%
- three or four	3%	13%	17%	8%	4%
- five +	1%	7%	11%	6%	5%
TOTAL	9%	30%	35%	16%	10%
5. HEADS 55-64					
- one	9%	5%	1%	-	-
- two	6%	18%	11%	3%	2%
- three or four	2%	9%	12%	7%	5%
- five +	-	2%	3%	3%	3%
TOTAL	17%	34%	27%	13%	10%

Table C-6
Cont'd

REGIONAL DISTRIBUTION OF HOUSEHOLD BY SIZE AND INCOME WITHIN AGE CATEGORIES

(1975 Incomes, 1971 Percentage Distribution)

	Income Ranges				
Households By Age and Size	<$6,400	$6,400-$12,800	$12,800-$19,200	$19,200-$25,600	$25,600+
6. HEADS 65+					
- one	30%	4%	1%	-	-
- two	22%	16%	6%	1%	2%
- three or four	2%	5%	4%	2%	1%
- five +	-	1%	1%	1%	1%
TOTAL	54%	26%	12%	4%	4%

2. Determining Budgets For Adequate Family Functioning.

The Metro Toronto Social Planning Council's latest budget was for August, 1974. The consumer's price index was used to update the costs, to June, 1975. The budget as published is disaggregated by type of budgeting item (food, clothing, personal care products, etc.) for each member of a given sized family, thus taking into account the cost differentials in purchasing for one or two or three, etc. persons. The age of child and activity level of adult employment is also disaggregated to account for different consumption needs.

The individual budgets were combined to arrive at budgets for different sized households whose heads are under and over 65 years. The annual totals

contain a 10% contingency allowance. In keeping with the household size breakdown in the census cross-tabulations (in order to match with incomes), household budgets in Table C-7 are for one person two persons, three or four persons (an average of the two sizes), and five plus person households (based on budget for five persons).

TABLE C-7

MONTHLY AND ANNUAL BUDGETS FOR ADEQUATE FAMILY FUNCTIONING, JUNE, 1975

Size Of Household	Cost of Necessities (Minus Shelter)*	
	Monthly	Annual
Heads under 65		
- one person	$236	$2,831
- two persons	$425	$5,102
- three or four persons	$501	$6,010
- five + persons	$642	$7,709
Heads over 65		
- one person	$175	$2,095
- two persons	$289	$3,472

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* *Includes 10% contingency allowance*

3. Calculating Residue Income For Housing

Actual income taxes were calculated, using the 1974 tax return forms, on the upper limits of each census income bracket as updated to 1975 incomes, by size of households. Basic deductions, dependent exemptions, where appropriate, and tax credits were employed. For each size of household, Household Budgets as shown in Table C-7 preceding, were subtracted from the net incomes to arrive at a residue income for housing. The results of this process are shown in Tables C-8 and C-9.

4. Matching Residue Income with Housing Cost

In this final step before forecasting housing unit types to 1986, the residue incomes of the households, as disaggregated in 1971 by income range and size, were compared to the current costs in purchase and rental housing. The matching process involved assumptions as listed earlier, on the minimum cost housing that would accommodate a given household size adequately. Table C-10 presents annual carrying costs of each type while Tables C-11 and C-12 compare these costs to residue incomes. These tables show that of those households in the lowest income range (below $7,600) with heads under 65 years, none of the two or more person households can afford minimum cost housing adequate for their size. For the five plus person households, none in the next range ($7,600 to $15,200) can afford ground related housing. Since we have assumed an even distribution of households within each income range, a proportion of single persons in the lowest income (over and under 65 years) cannot afford housing as well.

TABLE C-8

RESIDUE INCOME FOR HOUSING BY SIZE AND INCOME OF HOUSEHOLD

(For Heads Aged 64 and Under)

(Dollars)

Household Size	Income	Personal[2] Deduction	Dependent[3,4] Deduction	Taxable Income	Tax Paid[5]	Net Income	Basic[1] Budget	Residue
1. One Person	7,600	2,168.60	-	5,431.40	1,216.40	6,383.60	2,831.	3,552.60
	15,200	2,185.96	-	13,014.04	3,792.60	11,407.40	2,831.	8,576.40
	22,800	2,185.96	-	20,614.04	7,035.80	15,764.20	2,831.	12,933.20
	30,400	2,185.96	-	28,214.04	10,505.23	19,894.77	2,831.	17,063.77
2. Two Persons	7,600	2,168.60	1,492.	3,939.40	803.90	6,796.10	5,102.	1,694.16
	15,200	2,185.96	1,492.	11,522.04	3,201.40	11,998.60	5,102.	6,896.60
	22,800	2,185.96	1,492.	19,122.04	6,380.70	16,419.30	5,102.	11,317.30
	30,400	2,185.96	1,492.	26,722.04	9,774.97	20,625.03	5,102.	15,523.03
3. Three or Four Persons	7,600	2,168.60	1,972.	3,459.40	672.10	6,927.90	6,010.	917.90
	15,200	2,185.96	1,972.	11,042.04	3,032.80	12,167.20	6,010.	6,157.20
	22,800	2,185.96	1,972.	18,642.04	6,170.50	16,629.50	6,010.	10,619.50
	30,400	2,185.96	1,972.	26,242.04	9,540.03	20,859.97	6,010.	14,849.97
4. Five or More Persons	7,600	2,168.60	2,452.	2,979.40	542.80	7,057.20	7,709.	(-651.80)
	15,200	2,185.96	2,452.	10,562.04	2,863.30	12,336.70	7,709.	4,627.70
	22,800	2,185.96	2,452.	18,162.04	5,959.20	16,840.80	7,709.	9,131.80
	30,400	2,185.96	2,452.	25,762.04	9,305.11	21,094.89	7,709.	13,385.89

Assumptions:

1. *Cost of necessities (Basics Budget) do not vary with income, only size*
2. *Only one person per household works, the rest being dependents.*
3. *Dependent deductions for "three or four" persons calculated as average of one and two children, that is, 1 1/2 children plus spouse*
4. *Dependent deductions for "five plus" persons calculated as three children plus spouse*
5. *Ontario Tax Credits for housing not included.*

TABLE C-9

RESIDUE INCOME FOR HOUSING BY SIZE AND INCOME OF HOUSEHOLD

(For Heads 65 and Over)

(Dollars)

Household Size	Income	Personal[2] Deduction	Dependent[1] Deduction	Taxable Income	Tax Paid[3]	Net Income	Basics Budget	Residue
1. One Person	6,400	2,872	-	3,528	414	5,986	2,096	3,891
	12,800	2,872	-	9,928	2,488	10,312	2,095	8,217
	19,200	2,872	-	16,328	5,129	14,071	2,095	11,976
	25,600	2,872	-	22,728	7,962	17,638	2,095	15,543
2. Two Persons	6,400	2,872	1,492	2,036	No Tax	6,400	3,472	2,928
	12,800	2,872	1,492	8,436	1,940	10,860	3,472	7,388
	19,200	2,872	1,492	14,836	4,426	14,774	3,472	11,302
	25,600	2,872	1,492	21,236	7,308	18,292	3,472	14,820

Assumptions: 1. *household head only declares taxes with other person dependent*

2. *head does not claim employment-related deductions (CCP, UI, employment* [illegible]

3. *Ontario tax credits deducted from tax payable to get tax paid.*

TABLE C-10

ANNUAL CARRYING COSTS OF RENTAL AND PURCHASE HOUSING TYPES

(1975)

TYPE	ANNUAL COST
1. Rental*	
Bachelor	$1,600
1 Bedroom	$1,900
2 Bedrooms	$2,300
3 Bedrooms	$3,200
2. Purchase**	
Ground Related or Row Housing ($37,000)	$4,800
Semi ($44,000)	$5,700
Single ($50,000)	$7,200

---

* *Rental price assumes utilities are included*

** *Carrying costs for purchase housing assumes*

- *90% financing (10% downpayment)*
- *11 1/2% interest amortized over 25 years*
- *taxes and utilities included*

TABLE C-11

ABILITY TO AFFORD HOUSING BY SIZE AND INCOME OF HOUSEHOLD

(Household Heads Under 65)

(Dollars)

Household Size	Gross Income	Net Income	Basics Budget	Residue Income	Minimum Housing Type	Annual Carrying Cost	Excess Income Or (Shortfall)
1. One Person	2,300*	2,300	2,831	(-531)	Rental	1,600	(-213)
	7,600	6,384	2,831	3,553	Bachelor	1,600	1,953
	15,200	11,407	2,831	8,576		1,600	6,976
	22,000	15,764	2,831	12,933		1,600	11,330
	30,400	19,895	2,831	17,064		1,600	15,464
2. Two Persons	3,970*	3,970	5,102	(-1,132)	Rental	1,900	(-3,032)
	7,600	6,796	5,102	1,694	One	1,900	(-206)
	15,200	11,999	5,102	6,897		1,900	4,997
	22,800	16,419	5,102	11,317	Bedroom	1,900	9,417
	30,400	20,625	5,102	15,523		1,900	13,623
3. Three or Four Persons	4,920*	4,920	6,010	(-1,090)	Purchase	4,800	(-5,890)
	7,600	6,928	6,010	918	Townhouse	4,800	(-3,882)
	15,200	12,167	6,010	6,157		4,800	1,357
	22,800	16,630	6,010	10,620		4,800	5,820
	30,400	20,860	6,010	14,850		4,800	10,050
4. Five or More Persons	5,000**	5,000	7,709	(-2,709)	Purchase	4,800	(-7,509)
	7,600	7,057	7,709	(-652)	Townhouse	4,800	(-5,452)
	15,200	12,337	7,709	4,628		4,800	(-172)
	22,800	16,841	7,709	9,132		4,800	4,332
	30,400	31,095	7,709	13,386		4,800	8,586

---

* *Minimum income for each sized household based on Provincial Family Benefit Assistance (tax-free) and Regional Shelter Supplement*

** *Minimum income for households of five or more based on the head of the household earning minimum wage (Provincial Assistance for this household size including the Region's Shelter Supplement comes to an average of $5,770 which is above minimum wage). Assumption that this income with 4 dependents is tax free.*

TABLE C-12

ABILITY TO AFFORD HOUSING BY SIZE AND INCOME OF HOUSEHOLD

(Household Heads 65 and Over)

(Dollars)

Household Size	Gross Income	Net Income	Basics Budget	Residue Income	Minimum Housing Type	Annual Carrying Cost	Excess Income Or (Shortfall)
1. One Person	2,923*	2,923	2,095	828	Rental	1,600	(-772)
	6,400	5,986	2,095	3,891	Bachelor	1,600	2,291
	12,800	10,312	2,095	8,217		1,600	6,617
	19,200	14,071	2,095	11,976		1,600	10,376
	25,600	17,638	2,095	15,543		1,600	13,943
2. Two Persons	5,846*	5,846	3,472	2,374	Rental	1,900	474
	6,400	6,400	3,472	2,928	One	1,900	1,028
	12,800	10,860	3,472	7,388	Bedroom	1,900	5,488
	19,200	14,774	3,472	11,302		1,900	9,402
	25,600	18,292	3,472	14,820		1,900	12,920

---

* *Minimum income for seniors is current amount provided by G.A.I.N.S. (tax free)*

FORECASTING HOUSING TYPE

The basic purpose of the foregoing analyses was to establish the framework for forecasting the future need for different housing types. Tables C-13 through C-17 present the increase in number of households by income, size and age of head and the distribution of new housing units by type required in the Region from 1976 to 1981 and from 1981 to 1986.

The increase in households by type is based on:

- The TEIGA household projection (see Appendix A) for the total increase in households and by age of head
- The 1971 census cross-tabulation distribution of households within each age of head category by size and income - the latter updated to June 1975.

There is at present no basis for updating the 1971 size and income distribution of households. When the 1976 census information becomes available, the actual household distribution can be adjusted accordingly. To arrive at Table C-17, the distribution of housing unit requirements, the increase in households was apportioned by size, age of head and income so that:

- maximum bedroom occupancy would be two
- households with young children (age of head 25-44) would require ground related housing

- households with great housing flexibility (upper income groups) would follow past occupancy patterns.

Tables C-17 through C-21 summarize the results of this analysis. In the actual conversion of future households into housing units, a 2% vacancy rate and 235 unit per year replacement was applied. The latter is the average demolitions per year over the past 10 years. As for the vacancy rate, the Region has historically fluctuated around 2%, never reaching the 3% to 4% rate generally considered desirable. Yet, the Region's rate has not unduly pushed up costs making it highly doubtful if the 3-4% rate is appropriate.

Tables C-22 and C-23 summarize on an annual basis the Region's housing requirements by type including the allowance for the demolition and vacancy factors. Table C-23 summarizes the requirements removing the assumption that families with young children should occupy row-housing. This was felt necessary as the large number of units requiring subsidy as a result of this assumption was felt to be unobtainable.

Table C-13

ESTIMATED GROWTH IN HOUSEHOLDS BY INCOME, SIZE AND AGE OF HOUSEHOLD HEAD UNDER 65 1976-81

INCOME RANGE

SIZE OF HOUSEHOLD AND AGE		<7,600	7,600-15,200	15,200-22,800	22,800-30,400	30,400+
1	<25	110	70	-	-	-
	25-34	190	380	90	-	-
	35-44	30	60	30	-	-
	45-54	-90	-90	-30	-	-
	55-64	260	140	30	-	-
		500	560	120		
2	<25	130	310	230	30	-
	25-34	190	470	840	380	90
	35-44	30	100	100	30	30
	45-54	-60	-210	-180	-60	-30
	55-64	170	510	310	90	60
		460	1,180	1,300	470	150
3or 4	<25	100	300	80	10	-
	25-34	470	2,160	1,690	280	90
	35-44	100	410	480	60	60
	45-54	-90	-400	-520	-240	-120
	55-64	60	260	340	200	140
		640	2,730	2,070	310	170
5+	<25	10	10	10	-	-
	25-34	190	840	750	190	90
	35-44	100	510	630	220	130
	45-54	-30	-210	-340	-180	-150
	55-64	-	60	90	90	90
		270	1,210	1,140	320	160

Table C-14

ESTIMATED GROWTH IN HOUSEHOLDS BY INCOME, SIZE AND AGE OF HOUSEHOLD HEAD UNDER 65 1981-86

INCOME RANGE

SIZE OF HOUSEHOLD AND AGE		<7,600	7,600-15,200	15,200-22,800	22,800-30,400	30,400+
1	<25	110	70	-	-	-
	25-34	210	430	110	-	-
	35-44	30	70	30	-	-
	45-54	-70	-70	-20	-	-
	55-64	260	150	30	-	-
		540	650	150		
2	<25	130	310	230	30	-
	25-34	210	530	960	430	110
	35-44	30	100	100	30	30
	45-54	-50	-170	-140	-50	-20
	55-64	180	530	320	90	60
		500	1,300	1,470	530	180
3or 4	<25	100	300	80	10	-
	25-34	520	2,450	1,920	320	110
	35-44	100	440	500	130	70
	45-54	-70	-310	-410	-190	-100
	55-64	60	260	350	210	150
		710	3,140	2,440	480	230
5+	<25	10	10	10	-	-
	25-34	210	960	850	210	110
	35-44	100	540	670	240	130
	45-54	-20	-170	-260	-140	-120
	55-64	-	60	90	90	90
		300	1,400	1,360	400	210

Table C-15

ESTIMATED GROWTH IN HOUSEHOLDS BY INCOME AND SIZE OF HOUSEHOLDS OVER 65 1976-81

SIZE OF HOUSEHOLD	<6,400	6,400-12,800	12,800-19,200	19,200-25,600	25,600+
1	1,370	180	50	-	-
2	1,010	730	270	50	90
3or4	90	230	180	90	50
5+	-	50	50	50	50
	2,470	1,190	550	190	190

Table C-16

ESTIMATED GROWTH IN HOUSEHOLDS BY INCOME AND SIZE OF HOUSEHOLDS OVER 65 1981-86

SIZE OF HOUSEHOLD	<6,400	6,400-12,800	12,800-19,200	19,200-25,600	25,600+
1	1,040	140	30	-	-
2	770	560	210	30	70
3or4	70	170	140	70	30
5+	-	30	30	30	30
	1,880	900	410	130	130

TABLE C-17

DISTRIBUTION OF NEW HOUSING UNITS REQUIRED IN THE REGION

(1976-'81) (1981-'86)

TYPE	1976-1981 Units	1976-1981 %	1981-1986 Units	1981-1986 %
APARTMENT				
- Free Market	4,210	24%	4,120	21%
- Subsidized	2,160	12%	1,950	10%
ROW OR GROUND RELATED				
- Free Market	1,160	6%	1,260	7%
- Subsidized	4,030	22%	4,860	25%
SEMIS	1,080	6%	1,230	6%
SINGLES	5,510	30%	5,950	31%
TOTAL	18,150	100%	19,370	100%

Finally, tables C-18 through C-21 disaggregate these total new required units by size and income of household for heads under and over 65 years of age.

TABLE C-18

HOUSING DEMAND BY INCOME AND HOUSEHOLD SIZE

FOR ADDITIONAL HOUSEHOLDS UNDER 65 1976-81

	APARTMENTS		ROW OR GROUND RELATED		SEMI	SINGLE
1 Person	Free Market	Subsidized	Free Market	Subsidized		
<7,600	150	350	-	-	-	-
15,200	390	-	30	-	30	110
22,800	80	-	10	-	10	20
30,400+						
2 Persons						
<7,600	-	460	-	-	-	-
15,200	830	60	300	-	-	-
22,800	650	-	20	-	20	610
30,400	190	-	10	-	10	260
30,400+	40	-	-	-	-	110
3or4Persons						
<7,600	-	60	-	580	-	-
15,200	-	-	460	1,910	140	-
22,800	-	-	-	-	500	1,570
30,400	40	-	10	-	-	260
30,400+	20	-	-	-	-	150
5+Persons						
<7,600	-	-	-	270	-	-
15,200	-	-	-	1,210	-	-
22,800	-	-	260	60	310	510
30,400	20	-	10	-	10	290
30,400+	10	-	10	-	10	150
	2,420	930	1,120	4,030	1,040	4,040

TABLE C-19

HOUSEHOLD DEMAND BY INCOME AND HOUSEHOLD SIZE FOR ADDITIONAL HOUSEHOLDS OVER 65 1976-81

	APARTMENTS		ROW OR GROUND RELATED		SEMI	SINGLE
	Free Market	Subsidized	Free Market	Subsidized		
1 Person						
<6,400	140	1,230	-	-	-	-
12,800	100	-	-	-	-	80
19,200	30	-	-	-	-	20
25,600	-	-	-	-	-	-
25,600+	-	-	-	-	-	-
2 Persons						
<6,400	1,010	-	-	-	-	-
12,800	220	-	10	-	10	490
19,200	80	-	10	-	10	180
25,600	10	-	-	-	-	30
25,600+	20	-	-	-	-	70
3+ Persons						
<6,400	90	-	-	-	-	-
12,800	30	-	10	-	10	210
19,200	40	-	10	-	10	180
25,600	10	-	-	-	-	120
25,600+	10	-	-	-	-	90
	1,790	1,230	40	-	40	1,470

TABLE C-20

HOUSING DEMAND BY INCOME AND HOUSEHOLD SIZE
FOR ADDITIONAL HOUSEHOLDS UNDER 65 1981-86

	APARTMENTS		ROW OR GROUND RELATED		SEMI	SINGLE
1 Person	Free Market	Subsidized	Free Market	Subsidized		
<7,600	160	380	-	-	-	-
15,200	460	-	30	-	30	130
22,800	100	-	10	-	10	30
30,400	-	-	-	-	-	-
30,400+	-	-	-	-	-	-
2 Persons						
<7,600	-	500	-	-	-	-
15,200	910	60	320	-	-	-
22,800	740	-	20	-	20	690
30,400	220	-	10	-	10	290
30,400+	50	-	-	-	-	130
3or4 Persons						
<7,600	-	70	-	640	-	-
15,200	-	-	530	2,450	160	-
22,800	-	-	-	-	590	1,850
30,400	60	-	10	-	-	400
30,400+	20	-	-	-	-	200
5+ Persons						
<7,600	-	-	-	300	-	-
15,200	-	-	-	1,400	-	-
22,800	-	-	310	70	370	610
30,400	20	-	10	-	10	360
30,400+	10	-	-	-	-	190
	2,750	1,010	1,250	4,860	1,200	4,880

TABLE C-21

HOUSEHOLD DEMAND BY INCOME AND HOUSEHOLD SIZE
FOR ADDITIONAL HOUSEHOLDS OVER 65 1981-86

	APARTMENTS		ROW OR GROUND RELATED		SEMI	SINGLE
	Free Market	Subsidized	Free Market	Subsidized		
1 Person						
<6,400	100	940	-	-	-	-
12,800	80	-	-	-	-	60
19,200	20	-	-	-	-	10
25,600	-	-	-	-	-	-
25,600+	-	-	-	-	-	-
2 Persons						
<6,400	770	-	-	-	-	-
12,800	170	-	-	-	10	380
19,200	60	-	-	-	-	140
25,600	10	-	-	-	-	20
25,600+	20	-	2	-	-	50
3+ Persons						
<6,400	70	-	-	-	-	-
12,800	30	-	10	-	10	150
19,200	30	-	-	-	10	140
25,600	10	-	-	-	-	70
25,600+	-	-	-	-	-	50
	1,370	940	10	-	30	1,070

Table C-22

ANNUAL NEW HOUSING REQUIREMENTS IN THE REGION*

Type	1976 - 1981 Units	1976 - 1981 %	1981 - 1986 Units	1981 - 1986 %
Apartment				
- free market	890	24	820	21
- subsidized	440	12	390	10
Row or Ground Related				
- free market	220	6	270	7
- subsidized	810	22	980	25
Semis	220	6	230	6
Singles	1,110	30	1,210	31
Total	3,700		3,900	

---

* *Based on TEIGA population forecast*

Table C-23

ANNUAL NEW HOUSING REQUIREMENTS IN THE REGION*

(assuming families with young children in apartments)

	1976 - 1981		1981 - 1986	
Type	Units	%	Units	%
Apartment				
- free market	1,300	35%	1,360	35%
- subsidized	810	22%	820	21%
Row or Ground Related	220	6%	270	7%
Semis	220	6%	230	6%
Singles	1,110	30%	1,210	31%
Total	3,700	100%	3,900	100%

---

* *Based on TIEGA population forecast*

Table C-24

RANGE OF ANNUAL NEW HOUSING REQUIREMENTS IN THE REGION*

	1976-1981			1981-1986		
	Units			Units		
Type	Lowest	Teiga	Regional	Lowest	Teiga	Regional
Apartment						
- free market	1,050	1,300	1,360	1,190	1,360	1,580
- subsidized	660	810	860	710	820	940
Row or Ground Related	180	220	230	240	270	320
Semis	180	220	230	200	230	270
Singles	900	1,110	1,170	1,050	1,210	1,400
TOTAL	3,000	3,700	3,900	3,400	3,900	4,500

---

* *Assumes families with young children in apartments.*

LONG TERM FORECASTING OF UNIT TYPE

As part of the required input to the Regional official plan it was considered desirable to develop a technique that could be used to determine an indication of the mix of housing requirements for the 1986-2001 period. The technique described here is set up in such a way so that it can be used with a variety of population forecasts.

Household Size the Most Critical Factor

The most critical factor needed to convert the alternative official plan forecasts into households is the trend in the number of persons per household. As has been discussed elsewhere this figure has been declining in the Hamilton-Wentworth Region and current demographic and socio-economic factors would indicate a further decline. As a result for long term forecasting the following persons/household should be applied to the alternative population forecasts.

1976 - 3.1 persons/household
1981 - 2.9 persons/household
1986 - 2.7 persons/household
1991 - 2.6 persons/household
1996 - 2.6 persons/household
2001 - 2.6 persons/household

Age Structure of Population Important to Determine Type of Units

The age of the household head is a critical factor in determining type of housing required. Stratifying households by age of household head was accomplished by the use of Kirkland's revised estimates for the C.M.A. modified to reflect the inclusion of Burlington.

Kirkland's forecast is only complete to 1986; beyond this date we used Statistics Canada's cohort projection of Ontario's population by age (Projection B, 1974). This forecast was adjusted to reflect Regional-Provincial population age differences in 1971 Census, see Table C-25.

Table C-25

Comparative Actual
Age Distribution of Population
Region and Province 1971

Age	Province*	Region**	Deviation of Region from Province
0-14	29%	27%	-2%
15-24	18%	18%	0%
25-34	14%	13%	-1%
35-44	12%	12%	0%
45-54	11%	12%	+1%
55-64	8%	9%	+1%
65+	8%	9%	+1%

This population forecast was then converted to households by age of household head by use of household formation propensities assumptions (i.e. ratio of households to population in each age group). Table C-26 summarizes the results of this analysis; the distribution of total households should be applied to the estimate of total households that results from dividing alternative population forecasts by the suggested household size.

---

* *Source - Ontario Statistics Review, 1973- from Census*

** *Source - Census, 1971*

Table C-26

Estimated Distribution of Households by Age of Heads (1976 - 2001) for Hamilton-Wentworth Region

% of Total Households

Age of Head	1976*	1981*	1986*	1991**	1996**	2001**
15-24	7	7	7	6	5	6
25-34	23	26	29	24	20	18
35-44	17	17	17	22	23	24
45-54	20	16	20	16	19	20
55-64	16	16	16	14	14	14
65+	17	18	18	18	19	17
	100%	100%	100%	100%	100%	100%

---

* *Age of Head distribution based on Kirkland's (revised 1973, CMHC) distribution for the CMA. Percentage deviation of each Age of Head category was calculated for the Region from the CMA in actual census figures and applied to projected percentages.*

** *Age of Head distribution based on application of propensities to Statistics Canada's cohort projection of Ontario's population (Projection B, 1974). The cohort was adjusted to reflect Regional-Provincial population age differences in 1971 Census. Percentages then were applied to the Regional projection population bases for those years.*

Type of Housing Should Then be Calculated for Each Head of Household Age Grouping

This was accomplished based on a number of key assumptions:

- the 1975 cost/income relationship would remain constant
- past preferences for housing type would remain constant
- government housing programs would not be sufficient to alter this distribution significantly
- that historic norms of 2% vacancy and 235 demolitions annually would continue

Table C-27 gives the distribution of housing types anticipated by each age of household head age grouping.

Table C-27

Estimated Breakdown of Housing Type by Age of Household Head 1986-2001*

Regional Municipality of Hamilton - Wentworth

	Apartments	Row	Semi	Single
<25	72%	10%	3%	15%
25-34	53%	7%	6%	34%
35-44	41%	13%	5%	41%
45-54	40%	7%	8%	45%
55-64	52%	7%	5%	36%
65+	68%	-	1%	31%

---

* *Based upon an analysis of 1975 cost/income relationships and housing preferences*

These figures are applied to the number of households in each age grouping. Table C-28 estimates the proportion of units required by type for each five year period to the year 2001.

It should be cautioned that the reliability of any forecast of unit type for this length of time is questionable. However the method presented here provides a relatively quick and easy technique that could be used to obtain an indication of future types assuming current costs, incomes and preferences.

Table C-28

Estimated Proportion of Unit Types Required Annually by Five Year Periods to 2001

Regional Municipality of Hamilton-Wentworth

Unit Type	1986-1991	1991-1996	1996-2001
Apartment	42%	48%	44%
Row	10%	7%	9%
Semi	5%	5%	6%
Single	43%	40%	41%
Total	100%	100%	100%

Table C-29 summarizes the annual housing requirements by type for 1986-2001 period for the three key population projections.

Table C-29

Long Range Requirements by Unit Types

Lowest Project

Annual Requirements

Unit Type	1986-1991	1991-1996	1996-2001
Apartment	290	380	350
Row	70	60	70
Semi	40	40	50
Single	300	320	330
Total	700	800	800

Teiga Forecast

Annual Requirements

Unit Type	1986-1991	1991-1996	1996-2001
Apartment	590	530	400
Row	140	80	80
Semi	70	60	50
Single	600	440	370
Total	1,400	1,100	900

Regional Forecast

Annual Requirements

Unit Type	1986-1991	1991-1996	1996-2001
Apartment	970	1,200	1,140
Row	230	180	230
Semi	120	120	160
Single	990	1,000	1,070
Total	2,300	2,500	2,600

APPENDIX D

RENTAL ECONOMICS

This appendix presents the detailed results of an analysis carried out to determine what current breakeven rents would be for new high-rise, low-rise, and townhouse construction. Such breakeven rents assume a zero per cent rate of return on a 25% investment.

A range of assumptions were made on certain key cost variables, which in combination with some constant assumptions, were used as input for a computer model.

CONSTANT VARIABLES

For each of high-rise, low-rise, and townhouse rental units, several constant variables were used.

- Construction cost per square foot.
    - $17 per square foot for high-rise units
    - $20 per square foot for low-rise units
    - $20 per square foot for townhouse units
- Financing level.
    - 75% for all unit types
- Land component cost per unit.

  - $3,000/unit for both high and low-rise units
  - $10,000/unit for townhouse units

- Vacancy rate.
  - 2.2% for high-rise
  - 1.2% for low-rise
  - 1.0% for townhouses

- Composition of apartment structures.

  relates only to high and low-rise apartments
  - 45% each for one and two bedrooms
  - 5% each for bachelor and three bedrooms

CHANGING VARIABLES

A range of assumptions were calculated with the following variables to test their sensitivity in affecting overall rent.

- Terms of mortgage.
  - 25 years
  - 35 years

- Utilities and expenses.
  - heat included and excluded in rent
  - expenses as % of operating receipts calculated at 20%, 22.5%, 27.5%, 30%

- Mortgage interest rates.
  - varied at 8%, 9%, 10%, 11%, 11.5%, and 12.5%

- Size of unit.

  Chart below shows square foot sizes calculated for each unit type by housing type.

HOUSING TYPE	UNIT TYPE				
	Bachelor	One Bedroom	Two Bedroom	Three Bedroom	Four Bedroom
	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.
High-Rise and Low-Rise	500	650	800	950	-
	550	700	850	1,000	
	600	750	900	1,050	
Townhouse	-	-	-	1,200	1,450
				1,325	

Tables D-1 to D-9 summarize the results of the analysis. The breakeven rent of bachelor units is not shown but can be calculated under each combination of variables as .813664 times the one bedroom rent.

HIGH-RISE RENTS FOR SMALL SQUARE FOOT UNITS

TABLE D-1

CONSTRUCTION COST/SQ. FT.=$17.
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 2.2 PER CENT

RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF 0.00 PER CENT

			25 YEAR MORTGAGE						35 YEAR MORTGAGE					
			HEAT INCLUDED			HEAT EXCLUDED			HEAT INCLUDED			HEAT EXCLUDED		
			1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.
		SIZE(SQ. FT.)	650.	800.	950.	650.	800.	950.	650.	800.	950.	650.	800.	950.
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	8.0	$103.2	$123.7	$170.5	$ 81.6	$ 97.8	$134.9	$103.5	$124.1	$171.0	$ 81.9	$ 98.2	$135.
		9.0	$113.4	$136.0	$187.4	$ 91.8	$110.1	$151.7	$113.7	$136.3	$187.9	$ 92.2	$110.5	$152.
		10.0	$123.6	$148.1	$204.1	$102.0	$122.2	$168.5	$123.9	$148.5	$204.6	$102.3	$122.6	$169.
	22.5	8.0	$106.5	$127.7	$176.0	$ 85.0	$101.8	$140.4	$106.8	$128.1	$176.5	$ 85.3	$102.2	$140.
		9.0	$117.1	$140.3	$193.4	$ 95.5	$114.5	$157.8	$117.4	$140.7	$194.0	$ 95.8	$114.9	$158.
		10.0	$127.5	$152.9	$210.7	$106.0	$127.0	$175.1	$127.9	$153.3	$211.2	$106.3	$127.4	$175.
Lower Interest Rates	25.0	8.0	$110.1	$132.0	$181.9	$ 88.5	$106.1	$146.2	$110.4	$132.3	$182.4	$ 88.8	$106.5	$146.
		9.0	$121.0	$145.0	$199.9	$ 99.4	$119.2	$164.2	$121.3	$145.4	$200.4	$ 99.7	$119.6	$164.
		10.0	$131.8	$158.0	$217.7	$110.2	$132.1	$182.1	$132.1	$158.4	$218.3	$110.5	$132.5	$182.
	27.5	8.0	$113.9	$136.5	$188.1	$ 92.3	$110.6	$152.5	$114.2	$136.9	$188.7	$ 92.6	$111.0	$153.
		9.0	$125.2	$150.0	$206.8	$103.6	$124.2	$171.1	$125.5	$150.4	$207.3	$103.9	$124.6	$171.
		10.0	$136.3	$163.4	$225.2	$114.8	$137.6	$189.6	$136.7	$163.8	$225.8	$115.1	$138.0	$190.
	30.0	8.0	$117.9	$141.4	$194.9	$ 96.4	$115.5	$159.2	$118.3	$141.8	$195.4	$ 96.7	$115.9	$159.
		9.0	$129.6	$155.4	$214.2	$108.0	$129.5	$178.5	$130.0	$155.8	$214.7	$108.4	$129.9	$179.
		10.0	$141.2	$169.3	$233.3	$119.6	$143.4	$197.6	$141.6	$169.7	$233.9	$120.0	$143.8	$198.
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45.. 5.	20.0	11.0	$133.6	$160.2	$220.7	$112.0	$134.3	$185.1	$133.9	$160.5	$221.2	$112.3	$134.7	$1[illegible]
		11.5	$138.6	$166.2	$229.0	$117.0	$140.3	$193.4	$138.9	$166.5	$229.5	$117.3	$140.7	$19[illegible]
		12.5	$148.5	$178.1	$245.4	$127.0	$152.2	$209.8	$148.8	$178.4	$245.9	$127.3	$152.6	$210.
	22.5	11.0	$137.9	$165.3	$227.9	$116.3	$139.5	$192.2	$138.2	$165.7	$228.4	$116.7	$139.8	$192.
		11.5	$143.1	$171.5	$236.4	$121.5	$145.7	$200.8	$143.4	$171.9	$236.9	$121.8	$146.0	$201.
		12.5	$153.3	$183.8	$253.3	$131.8	$158.0	$217.7	$153.6	$184.2	$253.8	$132.1	$158.3	$218.
Higher Interest Rates	25.0	11.0	$142.5	$170.8	$235.5	$120.9	$145.0	$199.8	$142.8	$171.2	$236.0	$121.3	$145.4	$200.
		11.5	$147.9	$177.2	$244.3	$126.3	$151.4	$208.6	$148.2	$177.6	$244.8	$126.6	$151.8	$209.
		12.5	$158.4	$189.9	$261.8	$136.9	$164.1	$226.1	$158.8	$190.3	$262.3	$137.2	$164.4	$226.
	27.5	11.0	$147.4	$176.7	$243.6	$125.9	$150.9	$207.9	$147.8	$177.1	$244.1	$126.2	$151.3	$208.
		11.5	$152.9	$183.3	$252.7	$131.4	$157.5	$217.1	$153.3	$183.7	$253.2	$131.7	$157.9	$217.
		12.5	$163.9	$196.5	$270.8	$142.3	$170.6	$235.2	$164.2	$196.9	$271.3	$142.7	$171.0	$235.
	30.0	11.0	$152.7	$183.0	$252.3	$131.1	$157.2	$216.6	$153.0	$183.5	$252.8	$131.5	$157.6	$217.
		11.5	$158.4	$189.9	$261.7	$136.8	$164.0	$226.1	$158.8	$190.3	$262.3	$137.2	$164.4	$226.
		12.5	$169.8	$203.5	$280.5	$148.2	$177.6	$244.8	$170.1	$203.9	$281.0	$148.5	$178.0	$245.

HIGH-RISE RENTS FOR MEDIUM SQUARE FOOT UNITS

TABLE D-2

CONSTRUCTION COST/SQ. FT.=$17.
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 2.2 PER CENT

RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF 0.00 PER CENT

			25 YEAR MORTGAGE						35 YEAR MORTGAGE					
			HEAT INCLUDED			HEAT EXCLUDED			HEAT INCLUDED			HEAT EXCLUDED		
			1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.
	SIZE(SQ. FT.)		700.	850.	1000.	700.	850.	1000.	700.	850.	1000.	700.	850.	1000.
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	8.0	$107.8	$129.2	$178.1	$ 86.2	$103.4	$142.5	$108.1	$129.6	$178.6	$ 86.6	$103.8	$143.0
		9.0	$118.6	$142.2	$195.9	$ 97.0	$116.3	$160.3	$118.9	$142.6	$196.5	$ 97.3	$116.7	$160.8
		10.0	$129.3	$155.0	$213.6	$107.7	$129.1	$178.0	$129.6	$155.4	$214.1	$108.0	$129.5	$178.5
	22.5	8.0	$111.3	$133.4	$183.9	$ 89.7	$107.6	$148.2	$111.6	$133.8	$184.4	$ 90.0	$107.9	$148.8
		9.0	$122.4	$146.8	$202.3	$100.8	$120.9	$166.6	$122.8	$147.2	$202.8	$101.2	$121.3	$167.2
		10.0	$133.5	$160.0	$220.5	$111.9	$134.1	$184.8	$133.8	$160.4	$221.0	$112.2	$134.5	$185.4
Lower Interest Rates	25.0	8.0	$115.0	$137.9	$190.0	$ 93.4	$112.0	$154.4	$115.3	$138.3	$190.6	$ 93.8	$112.4	$154.9
		9.0	$126.5	$151.6	$209.0	$104.9	$125.8	$173.4	$126.8	$152.1	$209.6	$105.3	$126.2	$173.9
		10.0	$137.9	$165.3	$227.8	$116.3	$139.5	$192.2	$138.2	$165.7	$228.4	$116.7	$139.9	$192.8
	27.5	8.0	$119.0	$142.6	$196.6	$ 97.4	$116.8	$160.9	$119.3	$143.0	$197.1	$ 97.7	$117.2	$161.5
		9.0	$130.9	$156.9	$216.2	$109.3	$131.0	$180.6	$131.2	$157.3	$216.8	$109.6	$131.4	$181.2
		10.0	$142.7	$171.0	$235.7	$121.1	$145.2	$200.1	$143.0	$171.4	$236.3	$121.4	$145.6	$200.6
	30.0	8.0	$123.2	$147.7	$203.6	$101.6	$121.8	$167.9	$123.6	$148.1	$204.2	$102.0	$122.3	$168.5
		9.0	$135.5	$162.5	$223.9	$114.0	$136.6	$188.3	$135.9	$162.9	$224.5	$114.3	$137.1	$188.9
		10.0	$147.8	$177.1	$244.1	$126.2	$151.3	$208.5	$148.1	$177.6	$244.7	$126.5	$151.7	$209.1
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	11.0	$139.9	$167.7	$231.1	$118.3	$141.8	$195.5	$140.2	$168.1	$231.6	$118.6	$142.2	$196.
		11.5	$145.2	$174.0	$239.8	$123.6	$148.2	$204.2	$145.5	$174.4	$240.4	$123.9	$148.5	$204.7
		12.5	$155.6	$186.6	$257.2	$134.1	$160.7	$221.5	$155.9	$186.9	$257.6	$134.4	$161.1	$222.0
	22.5	11.0	$144.4	$173.1	$238.6	$122.8	$147.2	$202.9	$144.7	$173.5	$239.1	$123.2	$147.6	$203.5
		11.5	$149.8	$179.6	$247.6	$128.3	$153.8	$211.9	$150.2	$180.0	$248.1	$128.6	$154.2	$212.5
		12.5	$160.7	$192.6	$265.4	$139.1	$166.7	$229.8	$161.0	$193.0	$266.0	$139.4	$167.1	$230.3
Higher Interest Rates	25.0	11.0	$149.2	$178.9	$246.5	$127.6	$153.0	$210.9	$149.6	$179.3	$247.1	$128.0	$153.4	$211.4
		11.5	$154.8	$185.6	$255.8	$133.3	$159.8	$220.2	$155.2	$186.0	$256.4	$133.6	$160.2	$220.7
		12.5	$166.0	$199.0	$274.3	$144.4	$173.2	$238.7	$166.3	$199.4	$274.8	$144.8	$173.5	$239.2
	27.5	11.0	$154.4	$185.0	$255.0	$132.8	$159.2	$219.4	$154.7	$185.5	$255.6	$133.1	$159.6	$220.0
		11.5	$160.2	$192.0	$264.6	$138.6	$166.2	$229.0	$160.5	$192.4	$265.2	$139.0	$166.6	$229.6
		12.5	$171.7	$205.9	$283.8	$150.2	$180.0	$248.1	$172.1	$206.3	$284.3	$150.5	$180.4	$248.7
	30.0	11.0	$159.9	$191.7	$264.1	$138.3	$165.8	$228.5	$160.2	$192.1	$264.7	$138.7	$166.2	$229.1
		11.5	$165.9	$198.9	$274.1	$144.3	$173.0	$238.5	$166.3	$199.3	$274.7	$144.7	$173.4	$239.0
		12.5	$177.9	$213.2	$293.9	$156.3	$187.4	$258.2	$178.2	$213.6	$294.5	$156.7	$187.8	$258.8

HIGH-RISE RENTS FOR LARGE SQUARE FOOT UNITS

TABLE D-3

CONSTRUCTION COST/SQ. FT.=$17.
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 2.2 PER CENT

RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF 0.00 PER CENT

			25 YEAR MORTGAGE						35 YEAR MORTGAGE					
			HEAT INCLUDED			HEAT EXCLUDED			HEAT INCLUDED			HEAT EXCLUDED		
			1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.
		SIZE(SQ. FT.)	750.	900.	1050.	750.	900.	1050.	750.	900.	1050.	750.	900.	1050.
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	8.0	$112.4	$134.8	$185.8	$ 90.9	$108.9	$150.1	$112.8	$135.2	$186.3	$ 91.2	$109.3	$150.7
		9.0	$123.8	$148.4	$204.5	$102.2	$122.5	$168.8	$124.1	$148.8	$205.1	$102.5	$122.9	$169.4
		10.0	$135.0	$161.8	$223.1	$113.4	$136.0	$187.4	$135.4	$162.3	$223.6	$113.8	$136.4	$188.0
	22.5	8.0	$116.1	$139.1	$191.7	$ 94.5	$113.3	$156.1	$116.4	$139.5	$192.3	$ 94.8	$113.7	$156.7
		9.0	$127.8	$153.2	$211.1	$106.2	$127.3	$175.4	$128.1	$153.6	$211.7	$106.5	$127.7	$176.0
		10.0	$139.4	$167.1	$230.3	$117.8	$141.2	$194.6	$139.7	$167.5	$230.8	$118.1	$141.6	$195.2
Lower Interest Rates	25.0	8.0	$119.9	$143.8	$198.1	$ 98.4	$117.9	$162.5	$120.3	$144.2	$198.7	$ 98.7	$118.3	$163.1
		9.0	$132.0	$158.3	$218.1	$110.4	$132.4	$182.5	$132.4	$158.7	$218.7	$110.8	$132.8	$183.1
		10.0	$144.0	$172.6	$237.9	$122.4	$146.8	$202.3	$144.4	$173.1	$238.5	$122.8	$147.2	$202.9
	27.5	8.0	$124.1	$148.7	$205.0	$102.5	$122.9	$169.3	$124.4	$149.2	$205.6	$102.9	$123.3	$169.9
		9.0	$136.6	$163.7	$225.6	$115.0	$137.9	$190.0	$137.0	$164.2	$226.3	$115.4	$138.3	$190.6
		10.0	$149.0	$178.6	$246.1	$127.4	$152.7	$210.5	$149.4	$179.0	$246.8	$127.6	$153.2	$211.1
	30.0	8.0	$128.5	$154.0	$212.3	$106.9	$128.2	$176.6	$128.9	$154.5	$212.9	$107.3	$128.6	$177.3
		9.0	$141.5	$169.6	$233.7	$119.9	$143.7	$198.1	$141.8	$170.0	$234.3	$120.3	$144.2	$198.7
		10.0	$154.3	$185.0	$254.9	$132.7	$159.1	$219.3	$154.7	$185.4	$255.6	$133.1	$159.6	$219.9
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	11.0	$146.2	$175.2	$241.5	$124.6	$149.4	$205.9	$146.5	$175.6	$242.0	$124.9	$149.8	$206.4
		11.5	$151.7	$181.9	$250.7	$130.1	$156.0	$215.0	$152.0	$182.3	$251.2	$130.5	$156.4	$215.[illegible]
		12.5	$162.7	$195.1	$268.9	$141.2	$169.2	$233.2	$163.1	$195.5	$269.4	$141.5	$169.6	$233.8
	22.5	11.0	$150.9	$180.9	$249.3	$129.3	$155.0	$213.6	$151.2	$181.3	$249.9	$129.7	$155.4	$214.2
		11.5	$156.6	$187.7	$258.8	$135.0	$161.9	$223.1	$157.0	$188.1	$259.3	$135.4	$162.3	$223.7
		12.5	$168.0	$201.4	$277.6	$146.4	$175.5	$241.9	$168.3	$201.8	$278.1	$146.7	$175.9	$242.5
Higher Interest Rates	25.0	11.0	$155.9	$186.9	$257.6	$134.3	$161.0	$222.0	$156.3	$187.3	$258.2	$134.7	$161.5	$222.5
		11.5	$161.8	$194.0	$267.4	$140.3	$168.1	$231.7	$162.2	$194.4	$268.0	$140.6	$168.6	$232.3
		12.5	$173.6	$208.1	$286.8	$152.0	$182.2	$251.2	$173.9	$208.5	$287.4	$152.4	$182.6	$251.7
	27.5	11.0	$161.3	$193.4	$266.5	$139.7	$167.5	$230.8	$161.7	$193.8	$267.1	$140.1	$167.9	$231.4
		11.5	$167.4	$200.7	$276.6	$145.8	$174.8	$241.0	$167.8	$201.1	$277.2	$146.2	$175.3	$241.6
		12.5	$179.6	$215.3	$296.7	$158.0	$189.4	$261.1	$179.9	$215.7	$297.3	$158.4	$189.8	$261.6
	30.0	11.0	$167.1	$200.3	$276.0	$145.5	$174.4	$240.4	$167.4	$200.7	$276.6	$145.9	$174.8	$241.0
		11.5	$173.4	$207.9	$286.5	$151.8	$182.0	$250.8	$173.8	$208.3	$287.1	$152.2	$182.4	$251.5
		12.5	$186.0	$223.0	$307.3	$164.4	$197.1	$271.6	$186.4	$223.4	$307.9	$164.8	$197.5	$272.2

LOW-RISE RENTS FOR SMALL SQUARE FOOT UNITS

TABLE D-4

CONSTRUCTION COST/SQ. FT.=$20.
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 1.2 PER CENT

RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF 0.00 PER CENT

			25 YEAR MORTGAGE						35 YEAR MORTGAGE					
			HEAT INCLUDED			HEAT EXCLUDED			HEAT INCLUDED			HEAT EXCLUDED		
			1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.
		SIZE(SQ. FT.)	650.	800.	950.	650.	800.	950.	650.	800.	950.	650.	800.	950.
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	8.0	$114.0	$136.7	$188.4	$ 92.7	$111.1	$153.1	$114.4	$137.1	$189.0	$ 93.0	$111.5	$153.7
		9.0	$125.6	$150.6	$207.5	$104.2	$125.0	$172.2	$125.9	$151.0	$208.1	$104.6	$125.4	$172.8
		10.0	$137.1	$164.3	$226.4	$115.7	$138.7	$191.2	$137.4	$164.7	$227.0	$116.0	$139.1	$191.7
	22.5	8.0	$117.7	$141.1	$194.5	$ 96.4	$115.5	$159.2	$118.1	$141.5	$195.1	$ 96.7	$115.9	$159.8
		9.0	$129.6	$155.4	$214.2	$108.3	$129.8	$178.9	$130.0	$155.8	$214.8	$108.7	$130.2	$179.5
		10.0	$141.5	$169.6	$233.7	$120.1	$144.0	$198.5	$141.8	$170.0	$234.3	$120.5	$144.4	$199.1
Lower Interest Rates	25.0	8.0	$121.6	$145.8	$201.0	$100.3	$120.2	$165.7	$122.0	$146.2	$201.6	$100.6	$120.6	$166.3
		9.0	$134.0	$160.6	$221.3	$112.6	$135.0	$186.1	$134.3	$161.0	$222.0	$113.0	$135.4	$186.7
		10.0	$146.2	$175.2	$241.5	$124.8	$149.6	$206.3	$146.6	$175.7	$242.1	$125.2	$150.1	$206.9
	27.5	8.0	$125.8	$150.8	$207.9	$104.5	$125.2	$172.6	$126.2	$151.3	$208.5	$104.8	$125.7	$173.2
		9.0	$138.6	$166.1	$229.0	$117.2	$140.5	$193.7	$139.0	$166.6	$229.6	$117.6	$141.0	$194.3
		10.0	$151.2	$181.3	$249.9	$129.9	$155.7	$214.6	$151.6	$181.8	$250.5	$130.3	$156.2	$215.2
	30.0	8.0	$130.3	$156.2	$215.3	$109.0	$130.6	$180.0	$130.7	$156.7	$216.0	$109.4	$131.1	$180.7
		9.0	$143.5	$172.1	$237.1	$122.2	$146.5	$201.9	$143.9	$172.5	$237.8	$122.6	$146.9	$202.5
		10.0	$156.6	$187.8	$258.8	$135.3	$162.2	$223.5	$157.0	$188.2	$259.4	$135.7	$162.6	$224.2
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	11.0	$148.4	$177.9	$245.2	$127.1	$152.3	$209.9	$148.8	$178.3	$245.8	$127.4	$152.7	$210.5
		11.5	$154.1	$184.7	$254.6	$132.7	$159.1	$219.3	$154.4	$185.1	$255.1	$133.1	$159.5	$219.8
		12.5	$165.3	$198.2	$273.1	$144.0	$172.6	$237.8	$165.6	$198.6	$273.7	$144.3	$173.0	$238.4
	22.5	11.0	$153.2	$183.7	$253.1	$131.9	$158.1	$217.9	$153.6	$184.1	$253.7	$132.2	$158.5	$218.4
		11.5	$159.1	$190.7	$262.8	$137.7	$165.1	$227.5	$159.4	$191.1	$263.4	$138.0	$165.5	$228.1
		12.5	$170.6	$204.6	$281.9	$149.3	$179.0	$246.7	$171.0	$205.0	$282.5	$149.6	$179.4	$247.2
Higher Interest Rates	25.0	11.0	$158.3	$189.8	$261.6	$137.0	$164.2	$226.3	$158.7	$190.2	$262.2	$137.3	$164.6	$226.9
		11.5	$164.4	$197.0	$271.5	$143.0	$171.4	$236.3	$164.7	$197.4	$272.1	$143.4	$171.8	$236.8
		12.5	$176.3	$211.4	$291.3	$155.0	$185.8	$256.1	$176.7	$211.8	$291.9	$155.3	$186.2	$256.6
	27.5	11.0	$163.8	$196.3	$270.6	$142.4	$170.7	$235.3	$164.2	$196.8	$271.2	$142.8	$171.2	$235.9
		11.5	$170.0	$203.8	$280.9	$148.7	$178.2	$245.6	$170.4	$204.3	$281.5	$149.0	$178.7	$246.2
		12.5	$182.4	$218.7	$301.4	$161.1	$193.1	$266.1	$182.8	$219.1	$302.0	$161.4	$193.5	$266.7
	30.0	11.0	$169.6	$203.3	$280.3	$148.3	$177.7	$245.0	$170.0	$203.8	$280.9	$148.7	$178.2	$245.6
		11.5	$176.1	$211.1	$290.9	$154.7	$185.5	$255.7	$176.5	$211.6	$291.6	$155.1	$186.0	$256.3
		12.5	$188.9	$226.5	$312.2	$167.6	$200.9	$276.9	$189.3	$226.9	$312.8	$167.9	$201.3	$277.5

LOW-RISE RENTS FOR MEDIUM SQUARE FOOT UNITS

TABLE D-5

CONSTRUCTION COST/SQ. FT.=$20.
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 1.2 PER CENT

RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF 0.00 PER CENT

			25 YEAR MORTGAGE						35 YEAR MORTGAGE					
			HEAT INCLUDED			HEAT EXCLUDED			HEAT INCLUDED			HEAT EXCLUDED		
			1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.
		SIZE(SQ. FT.)	700.	850.	1000.	700.	850.	1000.	700.	850.	1000.	700.	850.	1000.
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	8.0	$119.4	$143.1	$197.3	$ 98.1	$117.5	$162.0	$119.8	$143.6	$197.9	$ 98.4	$118.0	$162.6
		9.0	$131.6	$157.8	$217.5	$110.3	$132.2	$182.2	$132.0	$158.2	$218.1	$110.6	$132.6	$182.8
		10.0	$143.7	$172.3	$237.5	$122.4	$146.7	$202.2	$144.1	$172.7	$238.1	$122.7	$147.1	$202.8
	22.5	8.0	$123.3	$147.8	$203.7	$101.9	$122.2	$168.4	$123.6	$148.2	$204.3	$102.3	$122.6	$169.0
		9.0	$135.9	$162.9	$224.5	$114.5	$137.3	$189.2	$136.2	$163.3	$225.1	$114.9	$137.7	$189.8
		10.0	$148.4	$177.9	$245.1	$127.0	$152.3	$209.8	$148.7	$178.3	$245.8	$127.4	$152.7	$210.5
Lower Interest Rates	25.0	8.0	$127.4	$152.7	$210.4	$106.0	$127.1	$175.2	$127.8	$153.1	$211.1	$106.4	$127.5	$175.8
		9.0	$140.4	$168.3	$232.0	$119.0	$142.7	$196.7	$140.8	$168.8	$232.6	$119.4	$143.2	$197.3
		10.0	$153.3	$183.8	$253.3	$132.0	$158.2	$218.0	$153.7	$184.3	$253.9	$132.3	$158.7	$218.7
	27.5	8.0	$131.8	$158.0	$217.7	$110.4	$132.4	$182.4	$132.2	$158.4	$218.3	$110.8	$132.8	$183.1
		9.0	$145.2	$174.1	$240.0	$123.9	$148.5	$204.7	$145.6	$174.6	$240.6	$124.3	$149.0	$205.3
		10.0	$158.6	$190.1	$262.0	$137.2	$164.5	$226.7	$159.0	$190.6	$262.7	$137.6	$165.0	$227.4
	30.0	8.0	$136.5	$163.6	$225.5	$115.1	$138.0	$190.2	$136.9	$164.1	$226.1	$115.5	$138.5	$190.9
		9.0	$150.4	$180.3	$248.5	$129.1	$154.7	$213.2	$150.8	$180.8	$249.2	$129.5	$155.2	$213.9
		10.0	$164.3	$196.9	$271.4	$142.9	$171.3	$236.1	$164.7	$197.4	$272.1	$143.3	$171.8	$236.3
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	11.0	$155.7	$186.7	$257.3	$134.4	$161.1	$222.0	$156.1	$187.1	$257.9	$134.7	$161.5	$222.6
		11.5	$161.7	$193.9	$267.2	$140.4	$168.3	$231.9	$162.1	$194.3	$267.8	$140.7	$168.7	$232.5
		12.5	$173.6	$208.1	$286.8	$152.2	$182.5	$251.5	$173.9	$208.5	$287.4	$152.6	$182.9	$252.1
	22.5	11.0	$160.8	$192.7	$265.6	$139.4	$167.1	$230.3	$161.1	$193.2	$266.2	$139.8	$167.6	$230.9
		11.5	$166.9	$200.1	$275.8	$145.6	$174.5	$240.5	$167.3	$200.5	$276.4	$145.9	$174.9	$241.1
		12.5	$179.2	$214.8	$296.0	$157.8	$189.2	$260.8	$179.5	$215.2	$296.6	$158.2	$189.6	$261.3
Higher Interest Rates	25.0	11.0	$166.1	$199.1	$274.5	$144.8	$173.5	$239.2	$166.5	$199.6	$275.1	$145.1	$174.0	$239.8
		11.5	$172.5	$206.8	$285.0	$151.1	$181.2	$249.7	$172.9	$207.2	$285.6	$151.5	$181.6	$250.3
		12.5	$185.2	$222.0	$305.9	$163.8	$196.4	$270.6	$185.5	$222.4	$306.5	$164.2	$196.8	$271.2
	27.5	11.0	$171.9	$206.0	$283.9	$150.5	$180.4	$248.6	$172.2	$206.5	$284.6	$150.9	$180.9	$249.3
		11.5	$178.4	$213.9	$294.8	$157.1	$188.3	$259.5	$178.8	$214.4	$295.5	$157.5	$188.8	$260.2
		12.5	$191.5	$229.6	$316.5	$170.2	$204.0	$281.2	$191.9	$230.1	$317.1	$170.6	$204.5	$281.8
	30.0	11.0	$178.0	$213.4	$294.1	$156.6	$187.8	$258.8	$178.4	$213.9	$294.7	$157.0	$188.3	$259.5
		11.5	$184.8	$221.6	$305.4	$163.5	$196.0	$270.1	$185.2	$222.0	$306.0	$163.9	$196.4	$270.7
		12.5	$198.4	$237.8	$327.8	$177.0	$212.2	$292.5	$198.8	$238.3	$328.4	$177.4	$212.7	$293.1

LOW-RISE RENTS FOR LARGE SQUARE FOOT UNITS

TABLE D-6

CONSTRUCTION COST/SQ. FT.=$20.
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 1.2 PER CENT

RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF 0.00 PER CENT

			25 YEAR MORTGAGE						35 YEAR MORTGAGE					
			HEAT INCLUDED			HEAT EXCLUDED			HEAT INCLUDED			HEAT EXCLUDED		
			1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.	1 BDM.	2 BDM.	3 BDM.
	SIZE(SQ. FT.)		750.	900.	1050.	750.	900.	1050.	750.	900.	1050.	750.	900.	1050.
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	8.0	$124.8	$149.6	$206.2	$103.4	$124.0	$170.9	$125.2	$150.0	$206.8	$103.8	$124.4	$171.5
		9.0	$137.7	$165.0	$227.4	$116.3	$139.4	$192.1	$138.0	$165.5	$228.1	$116.7	$139.9	$192.8
		10.0	$150.4	$180.3	$248.5	$129.0	$154.7	$213.2	$150.8	$180.8	$249.1	$129.4	$155.2	$213.8
	22.5	8.0	$128.8	$154.4	$212.8	$107.5	$128.8	$177.5	$129.2	$154.9	$213.5	$107.8	$129.3	$178.2
		9.0	$142.1	$170.3	$234.8	$120.7	$144.7	$199.5	$142.5	$170.8	$235.4	$121.1	$145.2	$200.1
		10.0	$155.3	$186.1	$256.5	$133.9	$160.5	$221.2	$155.7	$186.6	$257.2	$134.3	$161.0	$221.9
Lower Interest Rates	25.0	8.0	$133.1	$159.6	$219.9	$111.8	$134.0	$184.6	$133.5	$160.0	$220.6	$112.2	$134.4	$185.3
		9.0	$146.8	$176.0	$242.6	$125.5	$150.4	$207.3	$147.2	$176.5	$243.3	$125.9	$150.9	$208.0
		10.0	$160.4	$192.3	$265.1	$139.1	$166.7	$229.8	$160.8	$192.8	$265.7	$139.5	$167.2	$230.5
	27.5	8.0	$137.7	$165.1	$227.5	$116.3	$139.5	$192.2	$138.1	$165.6	$228.2	$116.8	$140.0	$192.9
		9.0	$151.9	$182.1	$250.9	$130.5	$156.5	$215.7	$152.3	$182.6	$251.7	$131.0	$157.0	$216.4
		10.0	$166.0	$198.9	$274.2	$144.6	$173.3	$238.9	$166.4	$199.5	$274.9	$145.0	$173.9	$239.6
	30.0	8.0	$142.6	$171.0	$235.6	$121.3	$145.4	$200.3	$143.0	$171.5	$236.3	$121.7	$145.9	$201.0
		9.0	$157.3	$188.6	$259.9	$136.0	$163.0	$224.6	$157.8	$189.1	$260.6	$136.4	$163.5	$225.4
		10.0	$171.9	$206.1	$284.0	$150.5	$180.5	$248.7	$172.3	$206.6	$284.7	$151.0	$181.0	$249.4
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
45. 45. 5.	20.0	11.0	$163.1	$195.5	$269.4	$141.7	$169.9	$234.1	$163.4	$195.9	$270.0	$142.1	$170.3	$234.7
		11.5	$169.3	$203.0	$279.8	$148.0	$177.4	$244.5	$169.7	$203.5	$280.4	$148.4	$177.9	$245.1
		12.5	$181.9	$218.0	$300.4	$160.5	$192.4	$265.2	$182.2	$218.4	$301.0	$160.9	$192.8	$265.8
	22.5	11.0	$168.3	$201.8	$278.1	$147.0	$176.2	$242.8	$168.7	$202.2	$278.7	$147.3	$176.6	$243.4
		11.5	$174.8	$209.6	$288.8	$153.5	$184.0	$253.5	$175.2	$210.0	$289.5	$153.8	$184.4	$254.2
		12.5	$187.7	$225.0	$310.1	$166.4	$199.4	$274.9	$188.1	$225.5	$310.8	$166.7	$199.9	$275.5
Higher Interest Rates	25.0	11.0	$173.9	$208.5	$287.4	$152.6	$182.9	$252.1	$174.3	$209.0	$288.0	$153.0	$183.4	$252.7
		11.5	$180.6	$216.5	$298.4	$159.3	$190.9	$263.2	$181.0	$217.0	$299.1	$159.7	$191.4	$263.8
		12.5	$194.0	$232.5	$320.5	$172.6	$206.9	$285.2	$194.4	$233.0	$321.1	$173.0	$207.4	$285.8
	27.5	11.0	$179.9	$215.7	$297.3	$158.6	$190.1	$262.0	$180.3	$216.2	$297.9	$159.0	$190.6	$262.7
		11.5	$186.9	$224.0	$308.7	$165.5	$198.4	$273.5	$187.3	$224.5	$309.4	$165.9	$198.9	$274.1
		12.5	$200.7	$240.5	$331.5	$179.3	$214.9	$296.2	$201.1	$241.0	$332.2	$179.7	$215.4	$296.9
	30.0	11.0	$186.3	$223.4	$307.9	$165.0	$197.8	$272.6	$186.8	$223.9	$308.6	$165.4	$198.3	$273.3
		11.5	$193.5	$232.0	$319.8	$172.2	$206.4	$284.5	$194.0	$232.5	$320.5	$172.6	$206.9	$285.2
		12.5	$207.8	$249.1	$343.4	$186.5	$223.5	$308.1	$208.2	$249.6	$344.0	$186.9	$224.0	$308.8

TOWNHOUSE RENTS FOR SMALL SQUARE FOOT UNITS

TABLE D-7

CONSTRUCTION COST/SQ. FT.=$20.
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 1.0 PER CENT

RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF 0.00 PER CENT

			25 YEAR MORTGAGE						35 YEAR MORTGAGE					
			HEAT INCLUDED			HEAT EXCLUDED			HEAT INCLUDED			HEAT EXCLUDED		
		SIZE(SQ. FT.)	3 BDM. 1200.			3 BDM. 1200.			3 BDM. 1200.			3 BDM. 1200.		
COMPOSITION BY BEDROOM COUNT	EXPENSES AS PERCENT OF OPERATING RECEIPTS	INTEREST RATE												
100. 0. 0.	20.0	8.0	$223.9	$ 0.0	$ 0.0	$199.8	$ 0.0	$ 0.0	$224.6	$ 0.0	$ 0.0	$200.5	$ 0.0	$ 0.0
		9.0	$248.4	$ 0.0	$ 0.0	$224.4	$ 0.0	$ 0.0	$249.2	$ 0.0	$ 0.0	$225.1	$ 0.0	$ 0.0
		10.0	$272.8	$ 0.0	$ 0.0	$248.8	$ 0.0	$ 0.0	$273.6	$ 0.0	$ 0.0	$249.5	$ 0.0	$ 0.0
	22.5	8.0	$231.1	$ 0.0	$ 0.0	$207.0	$ 0.0	$ 0.0	$231.8	$ 0.0	$ 0.0	$207.8	$ 0.0	$ 0.0
		9.0	$256.5	$ 0.0	$ 0.0	$232.4	$ 0.0	$ 0.0	$257.2	$ 0.0	$ 0.0	$233.2	$ 0.0	$ 0.0
		10.0	$281.6	$ 0.0	$ 0.0	$257.6	$ 0.0	$ 0.0	$282.4	$ 0.0	$ 0.0	$258.3	$ 0.0	$ 0.0
Lower Interest Rates	25.0	8.0	$238.8	$ 0.0	$ 0.0	$214.7	$ 0.0	$ 0.0	$239.5	$ 0.0	$ 0.0	$215.5	$ 0.0	$ 0.0
		9.0	$265.0	$ 0.0	$ 0.0	$241.0	$ 0.0	$ 0.0	$265.8	$ 0.0	$ 0.0	$241.8	$ 0.0	$ 0.0
		10.0	$291.0	$ 0.0	$ 0.0	$267.0	$ 0.0	$ 0.0	$291.8	$ 0.0	$ 0.0	$267.7	$ 0.0	$ 0.0
	27.5	8.0	$247.0	$ 0.0	$ 0.0	$223.0	$ 0.0	$ 0.0	$247.8	$ 0.0	$ 0.0	$223.8	$ 0.0	$ 0.0
		9.0	$274.1	$ 0.0	$ 0.0	$250.1	$ 0.0	$ 0.0	$275.0	$ 0.0	$ 0.0	$250.9	$ 0.0	$ 0.0
		10.0	$301.0	$ 0.0	$ 0.0	$277.0	$ 0.0	$ 0.0	$301.9	$ 0.0	$ 0.0	$277.8	$ 0.0	$ 0.0
	30.0	8.0	$255.8	$ 0.0	$ 0.0	$231.8	$ 0.0	$ 0.0	$256.7	$ 0.0	$ 0.0	$232.6	$ 0.0	$ 0.0
		9.0	$283.9	$ 0.0	$ 0.0	$259.9	$ 0.0	$ 0.0	$284.8	$ 0.0	$ 0.0	$260.7	$ 0.0	$ 0.0
		10.0	$311.8	$ 0.0	$ 0.0	$287.7	$ 0.0	$ 0.0	$312.6	$ 0.0	$ 0.0	$288.6	$ 0.0	$ 0.0
100. 0. 0.	20.0	11.0	$297.0	$ 0.0	$ 0.0	$273.0	$ 0.0	$ 0.0	$297.7	$ 0.0	$ 0.0	$273.7	$ 0.0	$ 0.0
		11.5	$309.0	$ 0.0	$ 0.0	$285.0	$ 0.0	$ 0.0	$309.8	$ 0.0	$ 0.0	$285.7	$ 0.0	$ 0.0
		12.5	$332.9	$ 0.0	$ 0.0	$308.9	$ 0.0	$ 0.0	$333.6	$ 0.0	$ 0.0	$309.6	$ 0.0	$ 0.0
	22.5	11.0	$306.6	$ 0.0	$ 0.0	$282.5	$ 0.0	$ 0.0	$307.3	$ 0.0	$ 0.0	$283.3	$ 0.0	$ 0.0
		11.5	$319.0	$ 0.0	$ 0.0	$295.0	$ 0.0	$ 0.0	$319.7	$ 0.0	$ 0.0	$295.7	$ 0.0	$ 0.0
		12.5	$343.7	$ 0.0	$ 0.0	$319.6	$ 0.0	$ 0.0	$344.4	$ 0.0	$ 0.0	$320.3	$ 0.0	$ 0.0
Higher Interest Rates	25.0	11.0	$316.8	$ 0.0	$ 0.0	$292.8	$ 0.0	$ 0.0	$317.6	$ 0.0	$ 0.0	$293.5	$ 0.0	$ 0.0
		11.5	$329.6	$ 0.0	$ 0.0	$305.6	$ 0.0	$ 0.0	$330.4	$ 0.0	$ 0.0	$306.4	$ 0.0	$ 0.0
		12.5	$355.1	$ 0.0	$ 0.0	$331.1	$ 0.0	$ 0.0	$355.9	$ 0.0	$ 0.0	$331.8	$ 0.0	$ 0.0
	27.5	11.0	$327.7	$ 0.0	$ 0.0	$303.7	$ 0.0	$ 0.0	$328.5	$ 0.0	$ 0.0	$304.5	$ 0.0	$ 0.0
		11.5	$341.0	$ 0.0	$ 0.0	$317.0	$ 0.0	$ 0.0	$341.8	$ 0.0	$ 0.0	$317.7	$ 0.0	$ 0.0
		12.5	$367.4	$ 0.0	$ 0.0	$343.3	$ 0.0	$ 0.0	$368.1	$ 0.0	$ 0.0	$344.1	$ 0.0	$ 0.0
	30.0	11.0	$339.4	$ 0.0	$ 0.0	$315.4	$ 0.0	$ 0.0	$340.3	$ 0.0	$ 0.0	$316.2	$ 0.0	$ 0.0
		11.5	$353.2	$ 0.0	$ 0.0	$329.1	$ 0.0	$ 0.0	$354.0	$ 0.0	$ 0.0	$330.0	$ 0.0	$ 0.0
		12.5	$380.5	$ 0.0	$ 0.0	$356.5	$ 0.0	$ 0.0	$381.3	$ 0.0	$ 0.0	$357.2	$ 0.0	$ 0.0

TOWNHOUSE RENTS FOR MEDIUM SQUARE FOOT UNITS

TABLE D-8

```
CONSTRUCTION  COST/SQ. FT.=$20.         RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF  0.00 PER CENT
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 1.0 PER CENT
                                    **             25 YEAR MORTGAGE                  **              35 YEAR MORTGAGE
                                    **      HEAT INCLUDED       *      HEAT EXCLUDED   **      HEAT INCLUDED       *      HEAT EXCLUDED
                                    ** 3 BDM.                   * 3 BDM.                 ** 3 BDM.                   * 3 BDM.
                      SIZE(SQ. FT.)** 1325.                    * 1325.                  ** 1325.                    * 1325.
------------------------------------**                          *                        **                          *
COMPOSITION EXPENSES  INTER**                                   *                        **                          *
BY BEDROOM  AS PERCE  EST  **                                   *                        **                          *
COUNT       NT OF OP  RATE **                                   *                        **                          *
            ERATING        **                                   *                        **                          *
            RECEIPTS       **                                   *                        **                          *
100.  0.  0.  20.0     8.0 ** $239.0  $  0.0  $  0.0 * $214.9  $  0.0  $  0.0 ** $239.8  $  0.0  $  0.0 * $215.7  $  0.0  $  0.0
                       9.0 ** $265.4  $  0.0  $  0.0 * $241.4  $  0.0  $  0.0 ** $266.2  $  0.0  $  0.0 * $242.2  $  0.0  $  0.0
                      10.0 ** $291.6  $  0.0  $  0.0 * $267.6  $  0.0  $  0.0 ** $292.4  $  0.0  $  0.0 * $268.4  $  0.0  $  0.0
              22.5     8.0 ** $246.7  $  0.0  $  0.0 * $222.7  $  0.0  $  0.0 ** $247.5  $  0.0  $  0.0 * $223.4  $  0.0  $  0.0
                       9.0 ** $274.0  $  0.0  $  0.0 * $249.9  $  0.0  $  0.0 ** $274.8  $  0.0  $  0.0 * $250.8  $  0.0  $  0.0
                      10.0 ** $301.0  $  0.0  $  0.0 * $277.0  $  0.0  $  0.0 ** $301.8  $  0.0  $  0.0 * $277.8  $  0.0  $  0.0
Lower Interest 25.0    8.0 ** $254.9  $  0.0  $  0.0 * $230.9  $  0.0  $  0.0 ** $255.7  $  0.0  $  0.0 * $231.7  $  0.0  $  0.0
Rates                  9.0 ** $283.1  $  0.0  $  0.0 * $259.1  $  0.0  $  0.0 ** $284.0  $  0.0  $  0.0 * $259.9  $  0.0  $  0.0
                      10.0 ** $311.1  $  0.0  $  0.0 * $287.0  $  0.0  $  0.0 ** $311.9  $  0.0  $  0.0 * $287.9  $  0.0  $  0.0
              27.5     8.0 ** $263.7  $  0.0  $  0.0 * $239.7  $  0.0  $  0.0 ** $264.6  $  0.0  $  0.0 * $240.5  $  0.0  $  0.0
                       9.0 ** $292.9  $  0.0  $  0.0 * $268.8  $  0.0  $  0.0 ** $293.8  $  0.0  $  0.0 * $269.7  $  0.0  $  0.0
                      10.0 ** $321.8  $  0.0  $  0.0 * $297.7  $  0.0  $  0.0 ** $322.7  $  0.0  $  0.0 * $298.6  $  0.0  $  0.0
              30.0     8.0 ** $273.1  $  0.0  $  0.0 * $249.1  $  0.0  $  0.0 ** $274.0  $  0.0  $  0.0 * $250.0  $  0.0  $  0.0
                       9.0 ** $303.3  $  0.0  $  0.0 * $279.3  $  0.0  $  0.0 ** $304.2  $  0.0  $  0.0 * $280.2  $  0.0  $  0.0
                      10.0 ** $333.3  $  0.0  $  0.0 * $309.2  $  0.0  $  0.0 ** $334.2  $  0.0  $  0.0 * $310.1  $  0.0  $  0.0


100.  0.  0.  20.0    11.0 ** $317.6  $  0.0  $  0.0 * $293.6  $  0.0  $  0.0 ** $318.4  $  0.0  $  0.0 * $294.3  $  0.0  $  0.0
                      11.5 ** $330.5  $  0.0  $  0.0 * $306.5  $  0.0  $  0.0 ** $331.3  $  0.0  $  0.0 * $307.2  $  0.0  $  0.0
                      12.5 ** $356.2  $  0.0  $  0.0 * $332.2  $  0.0  $  0.0 ** $357.0  $  0.0  $  0.0 * $332.9  $  0.0  $  0.0
              22.5    11.0 ** $327.9  $  0.0  $  0.0 * $303.8  $  0.0  $  0.0 ** $328.6  $  0.0  $  0.0 * $304.6  $  0.0  $  0.0
                      11.5 ** $341.2  $  0.0  $  0.0 * $317.1  $  0.0  $  0.0 ** $342.0  $  0.0  $  0.0 * $317.9  $  0.0  $  0.0
                      12.5 ** $367.7  $  0.0  $  0.0 * $343.7  $  0.0  $  0.0 ** $368.5  $  0.0  $  0.0 * $344.4  $  0.0  $  0.0
Higher Interest 25.0  11.0 ** $338.8  $  0.0  $  0.0 * $314.7  $  0.0  $  0.0 ** $339.6  $  0.0  $  0.0 * $315.5  $  0.0  $  0.0
Rates                 11.5 ** $352.6  $  0.0  $  0.0 * $328.5  $  0.0  $  0.0 ** $353.4  $  0.0  $  0.0 * $329.3  $  0.0  $  0.0
                      12.5 ** $380.0  $  0.0  $  0.0 * $355.9  $  0.0  $  0.0 ** $380.7  $  0.0  $  0.0 * $356.7  $  0.0  $  0.0
              27.5    11.0 ** $350.5  $  0.0  $  0.0 * $326.4  $  0.0  $  0.0 ** $351.3  $  0.0  $  0.0 * $327.3  $  0.0  $  0.0
                      11.5 ** $364.7  $  0.0  $  0.0 * $340.7  $  0.0  $  0.0 ** $365.6  $  0.0  $  0.0 * $341.5  $  0.0  $  0.0
                      12.5 ** $393.1  $  0.0  $  0.0 * $369.0  $  0.0  $  0.0 ** $393.9  $  0.0  $  0.0 * $369.8  $  0.0  $  0.0
              30.0    11.0 ** $363.0  $  0.0  $  0.0 * $338.9  $  0.0  $  0.0 ** $363.9  $  0.0  $  0.0 * $339.8  $  0.0  $  0.0
                      11.5 ** $377.8  $  0.0  $  0.0 * $353.7  $  0.0  $  0.0 ** $378.6  $  0.0  $  0.0 * $354.6  $  0.0  $  0.0
                      12.5 ** $407.1  $  0.0  $  0.0 * $383.1  $  0.0  $  0.0 ** $407.9  $  0.0  $  0.0 * $383.9  $  0.0  $  0.0
```

TOWNHOUSE RENTS FOR LARGE SQUARE FOOT UNITS

TABLE D-9

```
CONSTRUCTION  COST/SQ. FT.=$20.            RENTS REQUIRED FOR RETURN ON NET INVESTMENT OF  0.00 PER CENT
FINANCING LEVEL=75. PER CENT
VACANCY RATE= 1.0 PER CENT
                                  **                25 YEAR MORTGAGE                        **                35 YEAR MORTGAGE
                                  **        HEAT INCLUDED            *        HEAT EXCLUDED             **        HEAT INCLUDED            *        HEAT EXCLUDED
                                  ** 4 BDM.                          * 4 BDM.                           ** 4 BDM.                          * 4 BDM.
                SIZE(SQ. FT.)**  1450.                           *  1450.                           **  1450.                          *  1450.
------------------------------**                                  *                                  **                                 *
COMPOSITION EXPENSES  INTER**                                     *                                  **                                 *
BY BEDROOM  AS PERCE  EST  **                                     *                                  **                                 *
COUNT       NT OF OP  RATE **                                     *                                  **                                 *
            ERATING        **                                     *                                  **                                 *
            RECEIPTS       **                                     *                                  **                                 *
100.  0.  0.  20.0     8.0 ** $254.1  $   0.0  $   0.0 * $230.1  $   0.0  $   0.0 ** $255.0  $   0.0  $   0.0 * $230.9  $   0.0  $   0.0
                       9.0 ** $282.4  $   0.0  $   0.0 * $258.3  $   0.0  $   0.0 ** $283.2  $   0.0  $   0.0 * $259.2  $   0.0  $   0.0
                      10.0 ** $310.4  $   0.0  $   0.0 * $286.4  $   0.0  $   0.0 ** $311.3  $   0.0  $   0.0 * $287.2  $   0.0  $   0.0
              22.5     8.0 ** $262.3  $   0.0  $   0.0 * $238.3  $   0.0  $   0.0 ** $263.2  $   0.0  $   0.0 * $239.1  $   0.0  $   0.0
                       9.0 ** $291.5  $   0.0  $   0.0 * $267.4  $   0.0  $   0.0 ** $292.4  $   0.0  $   0.0 * $268.3  $   0.0  $   0.0
                      10.0 ** $320.4  $   0.0  $   0.0 * $296.4  $   0.0  $   0.0 ** $321.3  $   0.0  $   0.0 * $297.2  $   0.0  $   0.0
Lower Interest 25.0    8.0 ** $271.1  $   0.0  $   0.0 * $247.0  $   0.0  $   0.0 ** $272.0  $   0.0  $   0.0 * $247.9  $   0.0  $   0.0
Rates                  9.0 ** $301.2  $   0.0  $   0.0 * $277.2  $   0.0  $   0.0 ** $302.1  $   0.0  $   0.0 * $278.1  $   0.0  $   0.0
                      10.0 ** $331.1  $   0.0  $   0.0 * $307.0  $   0.0  $   0.0 ** $332.0  $   0.0  $   0.0 * $308.0  $   0.0  $   0.0
              27.5     8.0 ** $280.4  $   0.0  $   0.0 * $256.4  $   0.0  $   0.0 ** $281.3  $   0.0  $   0.0 * $257.3  $   0.0  $   0.0
                       9.0 ** $311.6  $   0.0  $   0.0 * $287.6  $   0.0  $   0.0 ** $312.5  $   0.0  $   0.0 * $288.5  $   0.0  $   0.0
                      10.0 ** $342.5  $   0.0  $   0.0 * $318.5  $   0.0  $   0.0 ** $343.5  $   0.0  $   0.0 * $319.4  $   0.0  $   0.0
              30.0     8.0 ** $290.4  $   0.0  $   0.0 * $266.4  $   0.0  $   0.0 ** $291.4  $   0.0  $   0.0 * $267.3  $   0.0  $   0.0
                       9.0 ** $322.7  $   0.0  $   0.0 * $298.7  $   0.0  $   0.0 ** $323.7  $   0.0  $   0.0 * $299.7  $   0.0  $   0.0
                      10.0 ** $354.7  $   0.0  $   0.0 * $330.7  $   0.0  $   0.0 ** $355.7  $   0.0  $   0.0 * $331.7  $   0.0  $   0.0


100.  0.  0.  20.0    11.0 ** $338.2  $   0.0  $   0.0 * $314.2  $   0.0  $   0.0 ** $339.0  $   0.0  $   0.0 * $315.0  $   0.0  $   0.0
                      11.5 ** $352.0  $   0.0  $   0.0 * $328.0  $   0.0  $   0.0 ** $352.8  $   0.0  $   0.0 * $328.8  $   0.0  $   0.0
                      12.5 ** $379.5  $   0.0  $   0.0 * $355.4  $   0.0  $   0.0 ** $380.3  $   0.0  $   0.0 * $356.2  $   0.0  $   0.0
              22.5    11.0 ** $349.1  $   0.0  $   0.0 * $325.1  $   0.0  $   0.0 ** $350.0  $   0.0  $   0.0 * $325.9  $   0.0  $   0.0
                      11.5 ** $363.4  $   0.0  $   0.0 * $339.3  $   0.0  $   0.0 ** $364.2  $   0.0  $   0.0 * $340.2  $   0.0  $   0.0
                      12.5 ** $391.7  $   0.0  $   0.0 * $367.7  $   0.0  $   0.0 ** $392.5  $   0.0  $   0.0 * $368.5  $   0.0  $   0.0
Higher Interest 25.0  11.0 ** $360.7  $   0.0  $   0.0 * $336.7  $   0.0  $   0.0 ** $361.6  $   0.0  $   0.0 * $337.6  $   0.0  $   0.0
Rates                 11.5 ** $375.5  $   0.0  $   0.0 * $351.4  $   0.0  $   0.0 ** $376.4  $   0.0  $   0.0 * $352.3  $   0.0  $   0.0
                      12.5 ** $404.8  $   0.0  $   0.0 * $380.7  $   0.0  $   0.0 ** $405.6  $   0.0  $   0.0 * $381.6  $   0.0  $   0.0
              27.5    11.0 ** $373.2  $   0.0  $   0.0 * $349.1  $   0.0  $   0.0 ** $374.1  $   0.0  $   0.0 * $350.0  $   0.0  $   0.0
                      11.5 ** $388.4  $   0.0  $   0.0 * $364.4  $   0.0  $   0.0 ** $389.3  $   0.0  $   0.0 * $365.3  $   0.0  $   0.0
                      12.5 ** $418.7  $   0.0  $   0.0 * $394.7  $   0.0  $   0.0 ** $419.6  $   0.0  $   0.0 * $395.6  $   0.0  $   0.0
              30.0    11.0 ** $386.5  $   0.0  $   0.0 * $362.5  $   0.0  $   0.0 ** $387.5  $   0.0  $   0.0 * $363.4  $   0.0  $   0.0
                      11.5 ** $402.3  $   0.0  $   0.0 * $378.3  $   0.0  $   0.0 ** $403.3  $   0.0  $   0.0 * $379.2  $   0.0  $   0.0
                      12.5 ** $433.7  $   0.0  $   0.0 * $409.7  $   0.0  $   0.0 ** $434.6  $   0.0  $   0.0 * $410.6  $   0.0  $   0.0
```

APPENDIX E

EVALUATION OF ALTERNATIVE ACTIONS

Municipalities can effectively assist in the delivery of housing to meet housing needs by using regulatory and budgetary powers, providing local incentives, implementing programs of senior levels of government and pressuring senior governments for new programs or for revisions to existing ones.

To determine the most effective approach to the housing issues each of the above activities was evaluated in terms of the availability of Federal/Provincial funds, the cost to the municipality and the effectiveness of the solution. The following table summarizes the review and identifies the best course of action for each of the following.

A. Setting and Meeting Housing Targets

B. Setting and Meeting Priorities for Socially Assisted Housing

C. Stimulating the Construction of Rental Accomodation

D. Rehabilitating Housing Stock

A. SETTING AND MEETING HOUSING TARGETS

ACTIVITIES	CRITERIA FOR EVALUATION		
	FED./PROV. FUNDS	COST TO MUNICIPALITY	EFFECTIVENESS
Regulatory Set annual production target for housing	-	-	Municipality cannot force the industry to produce units therefore has no means of ensuring that targets are met
Set an inventory of lots target - 2 years' supply for singles and semis; 3 years for rows and apartments	-	-	Very effective, municipality can control inventory, responsibility for production then clearly belongs to industry
Use unit type forecast as guidelines in community and sub-division plans	-	-	Effective means of ensuring mix in relation to needs
Ensure that other agencies are aware of the targets	-	-	Main obstacles may develop if all agencies are not planning to meet the housing targets
Monitor progress towards targets and report to council regularly	-	Cost of a monitoring program	Must be undertaken to ensure that targets are met and even more importantly to detect changes in quantity and types needed
Pressure Senior Gov'ts. Encourage provincial and federal gov't. to examine policies that could be used to eliminate leap-frogging of development	-	-	A common problem throughout the province, leap-frogging creates delays and adds to servicing costs

B. SETTING AND MEETING PRIORITIES FOR SOCIALLY ASSISTED HOUSING

ACTIVITIES	CRITERIA FOR EVALUATION		
	FED./PROV. FUNDS	COST TO MUNICIPALITY	EFFECTIVENESS
Regulatory Ensure that council is committed to priority groups for socially assisted housing 1. households with 3 or more members A. those on government assistance B. those spending too much on housing C. those able to afford but unable to find suitable family accomodation 2. single seniors	-	-	Priority cannot be met without the commitment of council
1A. Households on Gov't. Assistance Pressure Senior Gov'ts. Encourage province to reassess assistance allowance with goal of raising shelter allowance	-	-	Very effective, this group's main problem is income and the inability to afford proper standard of living, not just housing
Government Programs Provide additional housing under Federal/Provincial Public Housing (N.H.A. Sections 40-44)	Substantial	7½% of capital cost plus 7½% of operating deficit	Can deliver units at desired rents however can increase social problems due to spatial concentration of these households
Rent Supplement program in conjunction with Second Mortgage Financing, Accelerated Rental and Integrated Community	Substantial	7½% of the difference between OHC rent levels and market rates	Effective in providing units at needed rents plus integrates these households throughout community

B. SETTING AND MEETING PRIORITIES FOR SOCIALLY ASSISTED HOUSING

ACTIVITIES	CRITERIA FOR EVALUATION		
	FED./PROV. FUNDS	COST TO MUNICIPALITY	EFFECTIVENESS
1B. Spending Too Much Government Programs Make use of Federal/Provincial Public Housing (NHA Sections 40-44)	Substantial	7½% of capital cost plus 7½% of operating deficit	Can provide needed units at required rents, also good to mix working families with those on government allowances
Accelerated Rental (Modified Limited Dividend) Program	Limited	-	Unable to deliver units at rents that target group can afford however does provide more rent supplement units
Non-profit (NHA Section 34.18)	Substantial	Cost of setting up and running a municipal housing department	Majority of units provided at rents these groups cannot afford, however if inflation continues will be lower cost in the future
Co-op Housing (NHA Section 34.18)	Substantial	-	Majority of units provided not at rents these groups can afford however lower in future, difficult to find experienced non-profit groups interested in this program
Rent Supplement program in conjunction with Second Mortgage Financing, Accelerated Rental and Integrated Community	Substantial	7½% of the difference between OHC rent levels and market rents	Effective program, can provide units at required rents

B. SETTING AND MEETING PRIORITIES FOR SOCIALLY ASSISTED HOUSING

ACTIVITIES	CRITERIA FOR EVALUATION		
	FED./PROV. FUNDS	COST TO MUNICIPALITY	EFFECTIVENESS
1C Unable to Find Rental Units Suitable for Young Children Pressure Senior Gov'ts. to reassess depreciation as a deduction so that small investors will return to rental market providing smaller rental structures	-	-	Experience in this area has shown that walk-up apartment buildings are not attractive to major apartment developers, could however be attractive to small investors
Government Programs Encourage senior levels of gov't to give priority to rental proposals that will provide units suitable for families (Co-op, Non-Profit, Accelerate Rental, Public Housing)	Varies with program	Varies with program	Could be extremely effective Industry is quite willing to build units for singles and couples
2. Single Seniors Pressure Senior Gov'ts. Encourage a review of GAINS program for single seniors	-	-	Would provide single seniors with the income necessary to compete in the commercial housing market
Government Programs Ensure that units currently under development in the Federal/Provincial Public Housing program are provided	Substantial	7½% of capital cost plus 7½% of operating deficit	Units currently under development will meet needs to 1981 providing units at required rents

C. STIMULATING THE CONSTRUCTION OF RENTAL ACCOMMODATION

ACTIVITIES	CRITERIA FOR EVALUATION		
	FED./PROV. FUNDS	COST TO MUNICIPALITY	EFFECTIVENESS
Pressure Senior Gov'ts. to reassess: the extension of the provision that allows depreciation as a tax deduction against other income; the land speculation tax; and the land transfer tax	-	-	The introduction of these factors has placed greater emphasis on receiving higher rents on the part of investors, their removal would result in a return of smaller investors to the rental market
Encourage the province to quickly make a policy statement on rent control and guidelines for new buildings	-	-	Very effective; at present investors are unwilling to make investments in the current indefinite environment
Government Programs Make use of available gov't. programs	Substantial	Varies with program	As programs limited, should be directed towards severest problem areas (households with three or more members) and not just to increase the overall supply of rental units
Local Incentives Defer, exempt or reduce lot levys; property tax concessions	-	Substantial	Would be counter-productive as overall housing costs would increase to compensate for lost revenue, also scale of aid not large enough to induce investment
Regulatory Through sub-division process ensure that apartment mix is met	-	-	Will only work if investors are willing to invest in rental units

D. REHABILITATING HOUSING STOCK

ACTIVITIES	CRITERIA FOR EVALUATION		
	FED./PROV. FUNDS	COST TO MUNICIPALITY	
Regulatory Requires minimum maintenance and occupancy standards	Funds available to develop standards	Cost of inspection staff	A rehabilitation program cannot operate effectively without these standards
Local Incentives Local grants	-	Cost of grants, administration and inspection staff	Not necessary, other programs provide sufficient funding for local needs
Government Programs Neighbourhood Improvement and Residential Rehabilitation Assistance Programs	Substantial	Partial cost of inspection and administration staff plus 50% of NIP	Very effective in central area of Hamilton, elsewhere scattered nature of homes requiring rehabilitation makes this program of limited use
Ontario Home Renewal Program	\$2/capita in communities over 100,000, \$3/capita in communities 10,000-99,999, \$4/capita under 10,000	Partial cost of inspection and administration staff	Ideal for rehabilitation, if properly allocated should provide sufficient funds for income groups that require assistance
Guaranteed Home Improvement Loans	Private funds, government insurance		Loan interest ceiling creates problem during current period of high interest rates
Site Clearance	Limited federal funds available		Available for clearance of isolated pockets of substandard buildings, predominantly residential, outside of NIP areas, not major problems in the region